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of Transportation

**National Highway  
Traffic Safety  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

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FRANKLIN RESEARCH CENTER

Division of Arvin/Calspan  
[REDACTED], New York 14225

FRC ON-SITE AIR BAG DEPLOYMENT INVESTIGATION

CASE NO. 90-5

FLEET - 1989 DODGE DAYTONA

LOCATION - [REDACTED] NJ

ACCIDENT DATE - [REDACTED], 1990

Contract No. [REDACTED]

Prepared for:

U.S. Department of Transportation  
National Highway Traffic Safety Administration  
Washington, D.C. 20590

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# TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No. 90-5		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle FRC On-Site Air Bag Deployment Investigation Fleet - 1989 Dodge Daytona Location - [REDACTED] NJ				5. Report Date [REDACTED] 1990	
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				14. Sponsoring Agency Code	
15. Supplementary Notes On-site investigation of an air bag deployment crash that involved a 1989 Dodge Daytona.					
16. Abstract  This report focuses on a 1989 Dodge Daytona that was involved in a frontal sideswipe type impact sequence with a 1983 Toyota Corolla station wagon. The Daytona sustained a sufficient longitudinal deceleration to deploy the vehicle's driver air bag system.  The belted driver of the Daytona loaded the deployed air bag and steering wheel rim to compress the energy absorbing steering column 1.1". She sustained facial abrasions from her involvement with the air bag.					
17. Key Words Frontal sideswipe Sufficient longitudinal deceleration Air bag deployment				18. Distribution Statement  General Public	
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 60	
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FRANKLIN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION

FRC CASE NO. 90-5

FLEET - 1989 DODGE DAYTONA  
LOCATION - [REDACTED] NJ

SUMMARY

This crash occurred on a two lane state route on [REDACTED] 1990 at 0610 hours. Involved in the crash were the 1989 Dodge Daytona that was equipped with a driver air bag system and a 1983 Toyota Corolla station wagon. The 22-year-old female driver of the Dodge Daytona was en route to work and was traveling in a southerly direction at an estimated speed of 50 mph. She stated that she was looking in her rear view mirror immediately prior to the crash. Her vehicle crossed the centerline of the roadway and sideswiped the Toyota that was traveling in a northerly direction

Both vehicles sustained moderate sideswipe type damage that began on the extreme left corner of the frontal plane and extended down the entire left side (CDCs of 12-FLES-9). The endura bumper fascia of the Daytona compressed laterally which allowed the leading edge of the left front fender to contact the Toyota, resulting in 7" of rearward displacement of the fender edge. There was no front bumper reinforcement bar damage; however, the left bumper energy absorbing device compressed .125" and returned to its original position.

The impact induced deceleration was of sufficient magnitude to deploy the Daytona's driver air bag system. The female driver, 59", 121 lbs., stated that she was in a normal driving attitude with her seat adjusted to a forward position and the tilt steering column set below the center adjustment point. She was wearing the active 3-point belt system. Although there was no load-induced damage to the webbing, the latchplate was heavily scratched which indicated routine usage. In response to the 12 o'clock impact force, the driver moved forward and loaded the deployed air bag and the steering column. Her loading force compressed the energy absorbing column 1.6". Shear capsule separation was measured at 1.1" on the left unit and .4" at the right shear bracket. The steering wheel was displaced forward approximately 1" at the left upper quadrant. The driver's contact with the air bag resulted in abrasions (AIS-1) of the underside of the chin and of the left face. Following the crash, the driver was transported to a [REDACTED] where the attending physician diagnosed her facial abrasions as chemical burns.

The investigating police officer noted on his accident report that "the air bag blew up in the driver's face causing her to lose control and cross over into the opposite lane." An inadvertent deployment was ruled out by three factors:

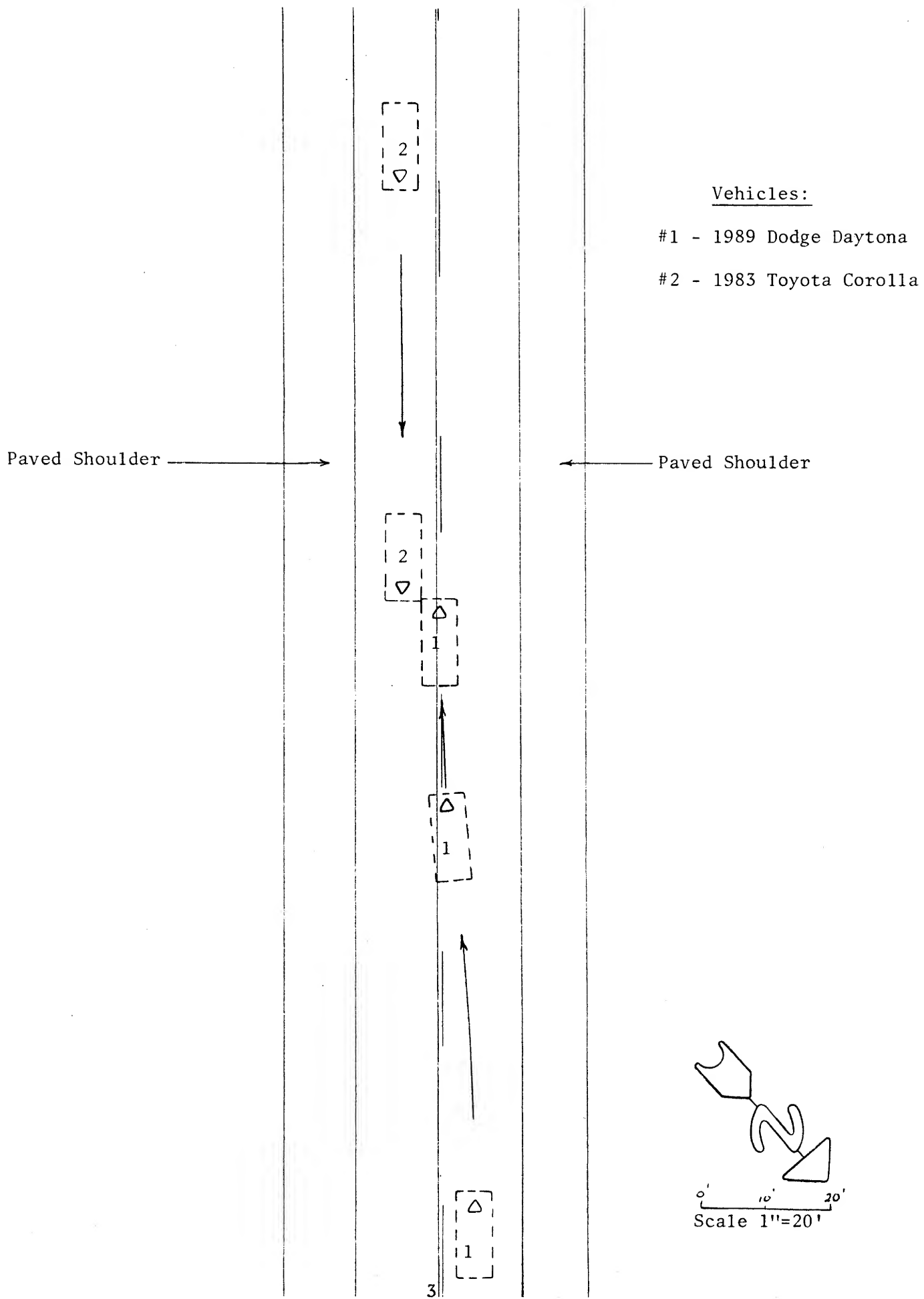
1) The driver did not state that the air bag system deployed prior to impact or that it caused the crash.

2) There was no damage (i.e., undercarriage) or factors at the scene to support a deployment prior to the sideswipe impact with the Toyota.

3) Chrysler's readout of the system's diagnostic unit did not yield any transient faults that would support or cause an inadvertent deployment.

Accident Schematic

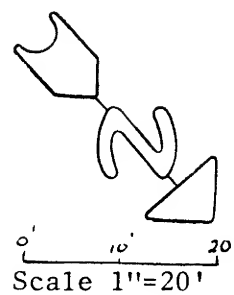
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Vehicles:

#1 - 1989 Dodge Daytona

#2 - 1983 Toyota Corolla



FRANKLIN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION

ERC CASE NO. 90-5

FLEET - 1989 DODGE DAYTONA  
LOCATION - [REDACTED], NJ

ACCIDENT DATA

Location: State route  
City/Township: [REDACTED] NJ  
Area/Type: Rural/Residential  
Accident Date/Time: [REDACTED] 1990, [REDACTED]  
Investigating Police Agency: [REDACTED] Department  
Accident Type: Car/Car, opposite direction sideswipe  
Air Bag Vehicle Occupant Injury Severity: Minor (AIS-1)

AMBIENCE

Viewing Conditions: Daylight  
Weather: Clear  
Precipitation: None  
Road Surface: Dry

HIGHWAY

Type: State route  
Number of Lanes: 2  
Width: 25'4"  
Surface: Asphalt  
Median: None  
Edge: East edge - 11' paved shoulder  
West edge - 10'2" paved shoulder

## HIGHWAY (CONT'D.)

Vertical Alignment:	1.5" grade, negative to the south
Horizontal Alignment:	Straight
Estimated Coefficient of Friction:	.70
Traffic Density:	Light

## TRAFFIC CONTROLS

Signals:	None
Signs:	No pertinent signs
Marking:	Yellow center lines which permit passing in the southbound direction, white edgelines
Speed Limit:	50 mph

## VEHICLES

	<u>Air Bag Vehicle</u>	<u>Vehicle #2</u>
Description:	1989 Dodge Daytona, 2 dr. hatchback	1983 Toyota Corolla, 4 dr., station wagon
V.I.N.:	1B3XG44K3KG (production number deleted)	JT2AE72W0D5 (production number deleted)
Color:	Red	Brown
Odometer:	22,892 miles	88,636 miles
Engine:	4 cylinder, 2.5 liter	4 cylinder
Transmission:	5-speed manual, floor mounted transmission lever	
Steering:	Power assisted rack and pinion	
Brakes:	Power four-wheel disc	
Padding:	Upper, mid, and lower instrument panel, soft edged steering wheel rim and air bag module cover, door panels, door armrests, adjustable head restraints	

VEHICLES (CONT'D.)

	<u>Air Bag Vehicle</u>	<u>Vehicle #2</u>
Active Restraints:	3-point lap and shoulder belts in the front outboard seated positions, 2 rear seat lap belts	
Passive Restraints:	Driver air bag system that deployed as a result of the sideswipe type impact	
Defects:	None	
Tow Status:	Towed due to damage	Towed due to damage

VEHICLE DAMAGE

	<u>Air Bag Vehicle</u>	<u>Vehicle #2</u>
Exterior:	<p>The air bag equipped 1989 Dodge Daytona sustained moderate damage from its sideswipe type impact sequence with vehicle #2. Initial contact involved the extreme left front corner of the bumper facia, outboard of the bumper reinforcement bar. The facia was displaced both rearward and laterally to the vehicle's right which allowed the leading edge of the left front fender to engage with vehicle #2 resulting in 7" of crush located at the fender's leading edge. The left bumper energy absorbing device (EAD) compressed 0.125" then returned to its original position. Direct contact damage on the frontal plane began 26.9" left of the vehicle's centerline and extended 0.875" to the corner of the bumper facia. Direct damage also extended 122" down the left side of the vehicle ending at the leading edge of the left rear wheel opening. Crush values could not be measured across the frontal plane due to the narrow contact width; therefore, a set of crush values were measured at the mid-door level of the left side surface. The C-measurements over the 122" direct contact length were as follows: C<sub>1</sub>=0.1", C<sub>2</sub>=0.5", C<sub>3</sub>=2.5", C<sub>4</sub>=3.2", C<sub>5</sub>=1.5", C<sub>6</sub>=2.2".</p>	<p>Vehicle #2 also sustained moderate damage from its involvement with the air bag vehicle. Direct frontal contact was 2.5" located at the left front bumper corner and turn signal assembly. Due to the minimal frontal contact, the left side of the Toyota engaged with the side of the Daytona resulting in 163.25" of direct contact damage which extended down the entire left side of the vehicle.</p> <p>Crush values at the left side surface were as follows: C<sub>1</sub>=0.1", C<sub>2</sub>=1.5", C<sub>3</sub>=2.75", C<sub>4</sub>=1.75", C<sub>5</sub>=1.25", C<sub>6</sub>=0.1".</p> <p>Damaged components included the front bumper covering, the left turn signal assembly, left front fender, both left doors, left A-pillar, windshield, and the left rear quarter panel.</p>

## VEHICLE DAMAGE (CONT'D.)

	<u>Air Bag Vehicle</u>	<u>Vehicle #2</u>
Exterior (Cont'd.):	Components damaged by the impact involved the front bumper fascia, the left front fender, upper radiator support panel, left front tire and wheel, left door, left outside rear view mirror, and the left rear quarter panel.	
CDC:	12-FLES-9	12-FLES-9
Repair Cost:	\$5830.26 (preliminary estimate)	Total loss
Interior (Air Bag Vehicle):	The interior of the air bag vehicle sustained minor damage that was associated solely with occupant loading. The driver's involvement with the steering assembly resulted in deformation of the spoke flange. The left upper quadrant of the steering wheel rim was displaced approximately 1" forward due to the spoke flange deformation. Her loading force also compressed the energy absorbing steering column 1.6" with 1.1" of left shear capsule separation.	

## AIR BAG SYSTEM

The driver air bag system of the Dodge Daytona was intact during FRC's inspection of the vehicle and there was no visible damage to the components. The investigating police officer noted on his report that "the air bag blew up in the driver's face causing her to lose control and cross over into the opposite lane." The driver did not state this during our interview with her nor did she blame the system as a cause of the accident. She did state that she was looking in her rear view mirror when the accident occurred.

Representatives from one of Chrysler's regional offices tested the system's diagnostic module for stored faults. No transient faults were recorded that could have caused an inadvertent deployment. The undercarriage of the vehicle and the accident scene were inspected for evidence of an impact that could have caused air bag deployment. No damage or road defects were found.

## VEHICLE VELOCITY ESTIMATES

The sideswipe type damage and impact configuration are outside the scope of the CRASHPC program; therefore velocity changes could not be computed for this crash.



## COLLISION SEQUENCE

Pre-Crash: The Dodge Daytona was traveling in a southerly direction on the two lane state route at a driver estimated speed of 50 mph. She stated that she was looking in her rear view mirror as her vehicle crossed the center line into the northbound travel lane. Vehicle #2 was traveling in a northerly direction at an unknown, but reasonable rate of speed.

Crash: The extreme left frontal corner area of the Dodge Daytona initially impacted the left front corner of vehicle #2. As the vehicles continued forward, the sides of the vehicles became engaged, resulting in a sideswipe type collision. Both vehicles sustained impact forces of 12 o'clock; however, due to the sideswipe type configuration, velocity changes could not be computed by the CRASHPC program. The longitudinal deceleration was of sufficient magnitude to deploy the Daytona's driver air bag system.

As the vehicles separated, the drivers braked and brought their respective vehicles to a controlled stop.

Post-Crash:

Final Rest - The involved vehicles were brought to controlled stops on the shoulders of the roadway facing in their original direction of travel.

Driver Activities - The driver of the Daytona stated that she heard a bang at impact that she associated with air bag deployment. She also noted a dust-like substance within the vehicle as it came to rest. She immediately exited the vehicle from the right door and waited for police to arrive on-scene.

Police Activities - A single police unit responded to the accident scene. The officer called for tow and rescue assistance as he initiated his investigation.

Rescue Activities - A rescue unit treated the driver of the air bag vehicle at the scene and transported her to a local hospital where she was treated for her injuries and released.

Scene Clearance - Both vehicles sustained disabling damage and were towed from the scene.

HUMAN FACTORS/OCCUPANT DATA

	<u>Air Bag Vehicle</u>	<u>Vehicle #2</u>
Driver:	22 year old female	34 year old male
Height:	59"	
Weight:	121 lbs.	
Occupation:	U.S. Army	
Active Restraint System Usage:	3-point lap and shoulder belt	
Usage Source:	Driver interview, vehicle inspection	
Eyeglasses:	None worn	
Vehicle Familiarity:	1 year	
Route Familiarity:	Daily	
Trip Plan:	En route to work	
Manner of Leaving Scene:	Ambulance	
Type of Medical Treatment:	Treated at a [REDACTED] and released	

AIR BAG DRIVER INJURIES

<u>Injury</u>	<u>Severity</u>	<u>Source</u>
Abrasion of the underside of the chin	Minor (FIAI-1)	Air bag
Abrasion of the left face	Minor (FLAI-1)	Air bag

#### AIR BAG DRIVER KINEMATICS

The driver of the Dodge Daytona was in a normal seated position at impact with both hands on the steering wheel rim. She stated that she was looking in her rear view mirror as her vehicle crossed the centerline and impacted vehicle #2. The driver's seat was adjusted to a forward position and the tilt column was set at a lower adjustment point. The 3-point lap and shoulder belt webbing did not show evidence of occupant loading; however, the latchplate was heavily scratched which indicated routine usage. She did state that she was wearing the active belt system at the time of the crash.

At impact the driver moved forward in response to the 12 o'clock direction of force impact. Her face loaded the upper portion of the deployed air bag which resulted in abrasions of the underside of her chin and of her left face. Her torso loaded the bag and the steering assembly with sufficient force to deform the spoke flange of the steering wheel rim and compress the energy absorbing steering column (1.1" of shear capsule separation). The air bag provided a sufficient ride down to protect the driver from further injury.

The doctor who treated the driver at a [REDACTED] diagnosed her abrasions as chemical burns as he learned of her involvement with the air bag. The driver stated that her abrasions healed with only slight (temporary) discoloration of the skin.

SELECTED PRINTS



Frontal View Of The Dodge Daytona.



Left Front Three-Quarter View.



Left Side View Of The Vehicle's Damage.



Close-up View Of The Displacement Of The  
Leading Edge Of The Left Front Fender.





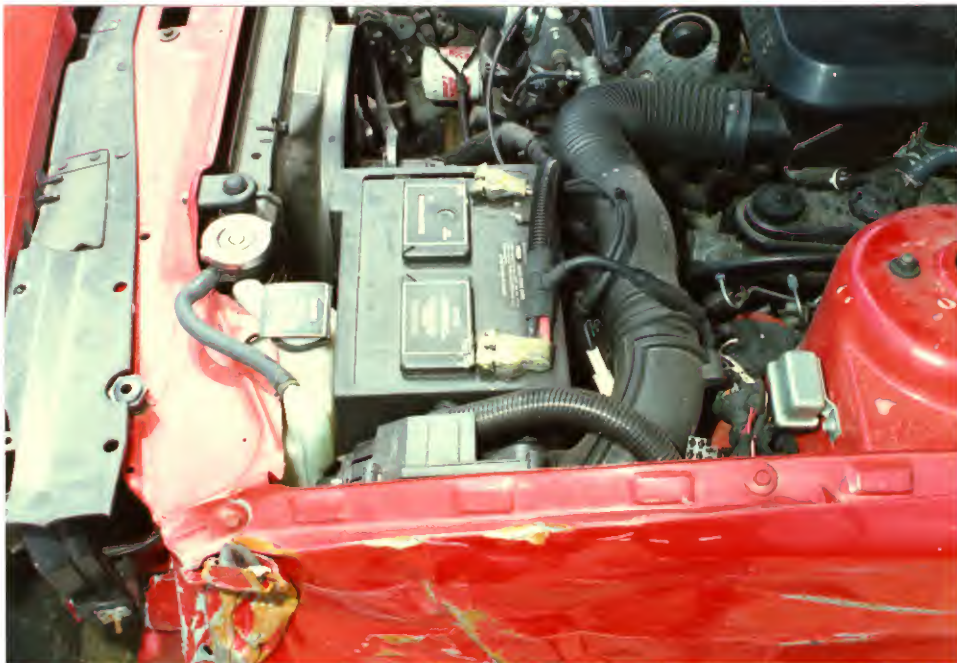
Left Corner Of The Front Bumper Reinforcement Bar.



Left Front Bumper Energy Absorbing Device.

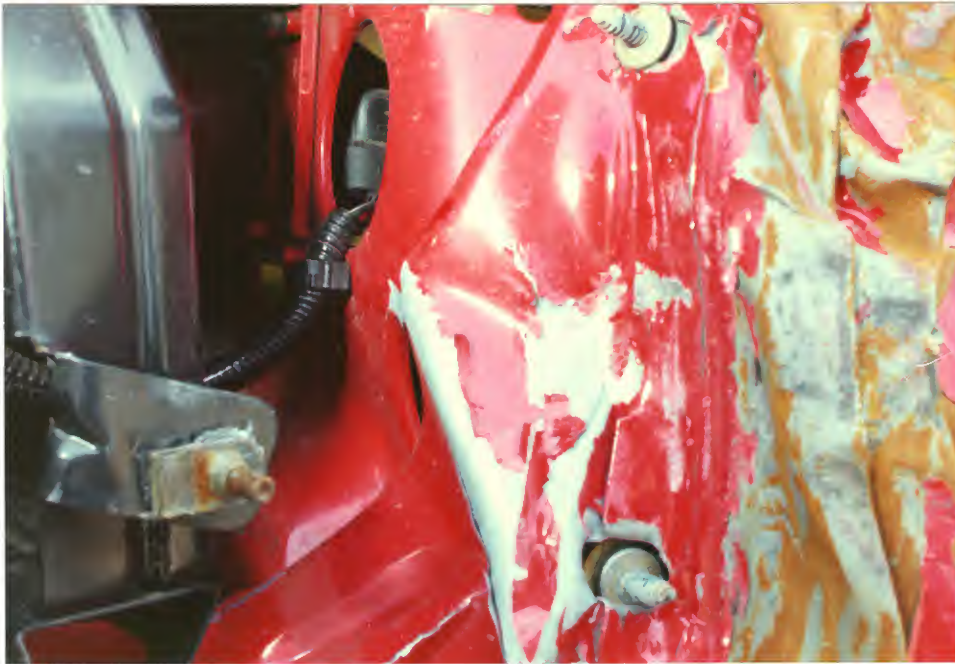


Daytona's Engine Compartment.

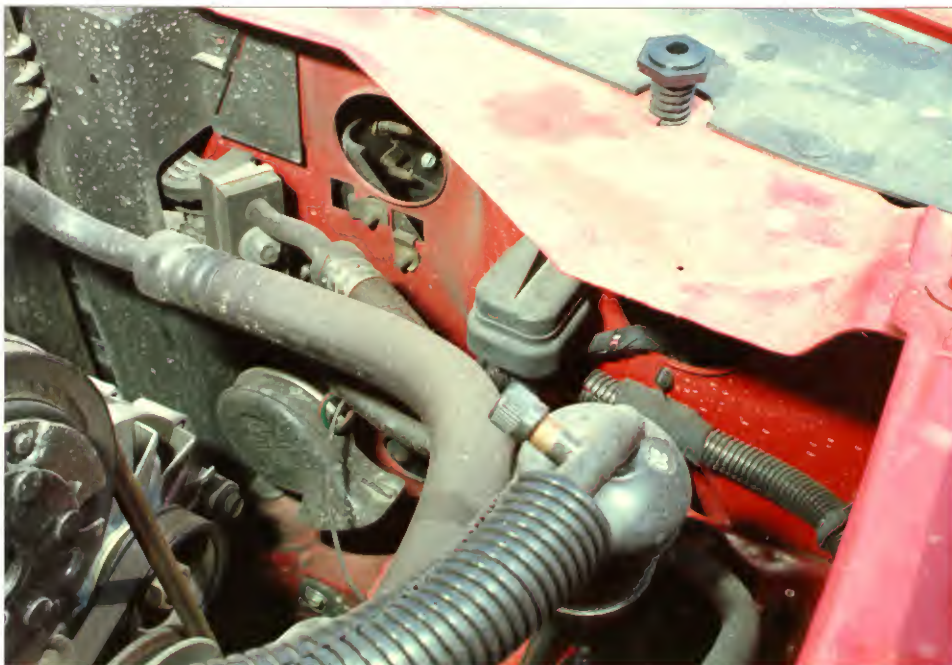


Area Of The Left Front Crash Sensor.





Left Front Crash Sensor.



Right Front Crash Sensor.





View Across The Interior From The Right Door Area.



Deployed Driver Air Bag.



Steering Wheel Deformation And Column Compression That Resulted  
From Occupant Loading.



Knee Bolster Reinforcement; No Damage.





Frontal View Of Vehicle #2.



Left Front Three-Quarter View.



Rearward Displacement Of The Leading Edge Of The  
Left Front Fender and Door.



Sideswipe Damage Extends To Rear Of Vehicle.

SLIDE INDEX

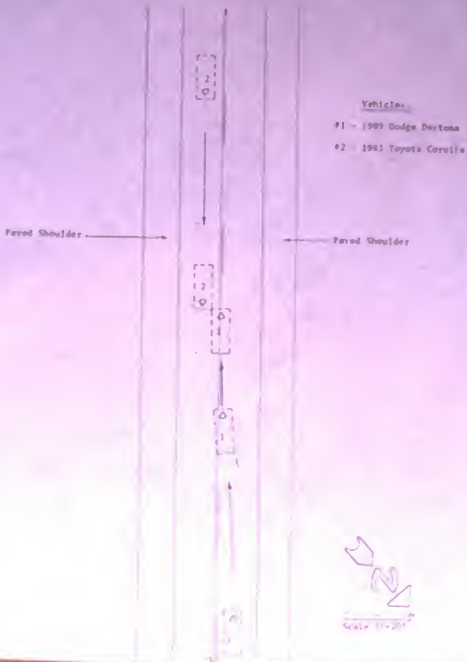
<u>Slide No(s).</u>	<u>Description</u>
1	Accident schematic
2	Driver injury mannequin
3-5	Trajectory of the air bag vehicle
6-8	Trajectory of vehicle #2
9	Frontal view of the Dodge Daytona
10-12	Longitudinal views
13	Left front three-quarter view
14	Close-up view of the left front corner
15	Left side profile
16-18	Rearward displacement of the leading edge of the left front fender
19	Left corner of the bumper reinforcement bar, no damage
20	Left front bumper energy absorbing device
21	Left front crash sensor
22	Damage to the left front tire and wheel
23	Rearward displacement of the leading edge of the left front door
24	Left rear view of the sideswipe damage
25,26	Damage to a previous repair to the left door and quarter panel
27-29	Views of the undamaged right side area
30	Engine compartment
31	Perpendicular view of the upper radiator support
32	Right front crash sensor
33-35	Front undercarriage views, no damage
36	V.I.N. plate

SLIDE INDEX  
(CONT'D.)

<u>Slide No(s).</u>	<u>Description</u>
37,38	Overall interior views
39	Driver loading of the steering wheel and EAD column
40,41	Driver air bag
42	Air bag identification numbers
43	Knee bolster reinforcement panel
44	Knee bolster
45	Driver's seat
46	Left front 3-point belt webbing and buckle
47	Frontal view of vehicle #2
48-50	Longitudinal views of the frontal sideswipe damage
51,52	Left side views
53,54	Left rear views of the damage
55	Right front three-quarter view

Accident Schematic

PRC Case No. 90-6

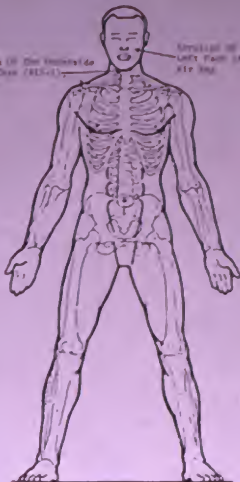




AGE 27  
 SEX Female  
 WT. 120 lbs  
 HT. 5'7"

Strap on the Ventrals  
 of the Chest (RIS-1)  
 Air Bag

Strap on the  
 Left Arm (RIS-2)  
 Air Bag



































































































100%  
Polyester















TOYOTA

















TOYOTA COROLLA

BUNLER







APPENDIX A

Police Accident Report

15:59  
15:21

NEW JERSEY POLICE ACCIDENT REPORT										FOR D.O.T. USE ONLY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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VEHICLE NO.										114. VEHICLE NO.										115. VEHICLE NO.										116. VEHICLE NO.										117. VEHICLE NO.										118. VEHICLE NO.										119. VEHICLE NO.										120. VEHICLE NO.										121. VEHICLE NO.										122. VEHICLE NO.										123. VEHICLE NO.										124. VEHICLE NO.										125. VEHICLE NO.										126. VEHICLE NO.										127. VEHICLE NO.										128. VEHICLE NO.										129. VEHICLE NO.										130. VEHICLE NO.										131. VEHICLE NO.										132. VEHICLE NO.										133. VEHICLE NO.										134. VEHICLE NO.										135. VEHICLE NO.										136. VEHICLE NO.										137. VEHICLE NO.										138. VEHICLE NO.										139. VEHICLE NO.										140. VEHICLE NO.										141. VEHICLE NO.										142. VEHICLE NO.										143. VEHICLE NO.										144. VEHICLE NO.										145. VEHICLE NO.										146. VEHICLE NO.										147. VEHICLE NO.										148. VEHICLE NO.										149. VEHICLE NO.										150. VEHICLE NO.										151. VEHICLE NO.										152. VEHICLE NO.										153. VEHICLE NO.										154. VEHICLE NO.										155. VEHICLE NO.										156. VEHICLE NO.										157. VEHICLE NO.										158. VEHICLE NO.										159. VEHICLE NO.										160. VEHICLE NO.										161. VEHICLE NO.										162. VEHICLE NO.										163. VEHICLE NO.										164. VEHICLE NO.										165. VEHICLE NO.										166. VEHICLE NO.										167. VEHICLE NO.										168. VEHICLE NO.										169. VEHICLE NO.										170. VEHICLE NO.										171. VEHICLE NO.										172. VEHICLE NO.										173. VEHICLE NO.										174. VEHICLE NO.										175. VEHICLE NO.										176. VEHICLE NO.										177. VEHICLE NO.										178. VEHICLE NO.										179. VEHICLE NO.										180. VEHICLE NO.										181. VEHICLE NO.										182. VEHICLE NO.										183. VEHICLE NO.										184. VEHICLE NO.										185. VEHICLE NO.										186. VEHICLE NO.										187. VEHICLE NO.										188. VEHICLE NO.										189. VEHICLE NO.										190. VEHICLE NO.										191. VEHICLE NO.										192. VEHICLE NO.										193. VEHICLE NO.										194. VEHICLE NO.										195. VEHICLE NO.										196. VEHICLE NO.										197. VEHICLE NO.										198. VEHICLE NO.										199. VEHICLE NO.										200. VEHICLE NO.										201. VEHICLE NO.										202. VEHICLE NO.										203. VEHICLE NO.										204. VEHICLE NO.										205. VEHICLE NO.										206. VEHICLE NO.										207. VEHICLE NO.										208. VEHICLE NO.										209. VEHICLE NO.										210. VEHICLE NO.										211. VEHICLE NO.										212. VEHICLE NO.										213. VEHICLE NO.										214. VEHICLE NO.										215. VEHICLE NO.										216. VEHICLE NO.										217. VEHICLE NO.										218. VEHICLE NO.										219. VEHICLE NO.										220. VEHICLE NO.										221. VEHICLE NO.										222. VEHICLE NO.										223. VEHICLE NO.										224. VEHICLE NO.										225. VEHICLE NO.										226. VEHICLE NO.										227. VEHICLE NO.										228. VEHICLE NO.										229. VEHICLE NO.										230. VEHICLE NO.										231. VEHICLE NO.										232. VEHICLE NO.										233. VEHICLE NO.										234. VEHICLE NO.										235. VEHICLE NO.										236. VEHICLE NO.										237. VEHICLE NO.										238. VEHICLE NO.										239. VEHICLE NO.										240. VEHICLE NO.										241. VEHICLE NO.										242. VEHICLE NO.										243. VEHICLE NO.										244. VEHICLE NO.										245. VEHICLE NO.										246. VEHICLE NO.										247. VEHICLE NO.										248. VEHICLE NO.										249. VEHICLE NO.										250. VEHICLE NO.										251. VEHICLE NO.										252. VEHICLE NO.										253. VEHICLE NO.										254. VEHICLE NO.</									

24

APPENDIX B

Air Bag Supplement

## ACCIDENT SUMMARY

ACCIDENT DATE            / 90

POLICE INVESTIGATED (1,2,9)\*

           POLICECity            County           

## GENERAL LOCALITY

- (1) Freeway, Limited Access  
(2) Urban (City)  
(3) Urban-Rural (mixed)  
(4) Rural, Fields

## CONFIGURATION (First Harm)

- (0) Struck Object or Pedestrian  
(1) Rear-End  
(2) Head-On  
(3) Rear-to-Rear  
(4) Angle  
(5) Sideswipe-Same Direction  
(6) Sideswipe-Opposite Direct.  
(7) NonColl:eg Fell from Veh  
(8) NonImpact Deployment  
(9) Unknown

## FIRE INVOLVED (0) None

- (1) AirBag Vehicle  
(2) Other Vehicle  
(3) Both Vehicles  
(9) Unknown

NUMBER: VEHICLES INVOLVED

(8)=8 or more

PERSONS INVOLVED

INJURED PERSONS

MAXIMUM AIS IN ACCIDENT

OTHER VEHICLE: MAXIMUM AIS

PRIME/DEPLOY IMPACT w AB VEH:  
EVENT NUMBERCDC 12 - FLEET - 9

TOTAL DELTA-V

Model Year, Make, Model, Body Type:

83 TOYOTA COROLLA

## AIRBAG VEHICLE INSPECTION

DATE VEH. INSPECTED            / 90

## REASON VEHICLE NOT INSPECTED

- (0) Not Required  
(1) Inspection Completed  
(2) Cannot be Located\*\*  
(3) Repaired or Destroyed\*\*  
(5) Refual or Impounded\*\*  
(7) Other\*

\*\*Specify:                                 

## IMPACT DATA OBTAINED

- (0) No Data Obtained  
(1) CDC Only  
(2) Crush Profile Only  
(3) Trajectory Data Only  
(4) CDC and Crush Profile  
(5) CDC and Trajectory  
(6) Crush and Trajectory  
(7) CDC, Crush & Trajectory

## BASIS OF DELTA-V

- (0) Not Computed (Unknown Why)  
(1) CRASH - Damage Only  
(2) CRASH - Damage+Trajectory  
(3) Missing Vehicle Algorithm  
(4) Yielding Object Algorithm  
(5) Unknown Basis  
(6) One Vehicle Beyond Scope  
(7) Collision Beyond Scope  
(8) Insufficient Data

## VEHICLE HISTORY

HAS AIRBAG VEHICLE BEEN IN  
ANY PRIOR IMPACTS (1,2,9)\*HAS ANY PRIOR MAINTENANCE/SERVICE  
BEEN PERFORMED ON SYSTEM(1,2,9)\*\*Describe: MINOR SIDESWIPE LEFT SIDEAIRBAG VEHICLE: FLEET DAYTONAVIN 1B3XG44MILEAGE 22,892



**SYSTEM READINESS LAMP**  
 (In Instrument Cluster)

**RE-IMPACT LAMP CONDITION**

- (1) Functioning/ProvedOut  
 (2) Inoperative  
 (9) Unknown

**DRIVER'S REPORT OF  
 PRE-IMPACT FLASHING**

- (00) No Flashing Reported  
 (01) Continuous Flashing  
 (02) -- >Number of Flashes  
 (11)  
 (12) Constant Light  
 (19) Flashing, Unkn Number  
 (88) Not App (system removed)  
 (99) Unknown

**PERIOD OF PRE-IMPACT FLASHING**

- (0) No Flashing  
 (1) Same Day as Impact  
 (2) Prior Day  
 (3) Prior Two Days  
 (4) Prior Week  
 (5) Prior Month  
 (6) Over One Month  
 (9) Unknown

**POST-IMPACT LAMP CONDITION**

- (1) Functioning/ProvedOut  
 (2) Inoperative  
 (9) Unknown

**POST-IMPACT FLASHING**

- (00) No Flashing  
 (01) Continuous Flashing  
 (02) -- >Number of Flashes  
 (11)  
 (12) Constant Light  
 (19) Flashing, Unkn Number  
 (88) Not Appl (removed)  
 (99) Unknown

**AIRBAG VEHICLE  
 FIRST HARMFUL EVENT**
13

- (01) Fire or explosion  
 (02) Immersion  
 (03) Gas Inhalation  
 (04) Fell from vehicle  
 (05) Injured in vehicle  
 (06) Other noncollision (specify):  
 (07) Overturn  
 (08) Jackknife with intraunit damage  
 Collision With:  
 (09) Pedestrian  
 (10) Pedalcyclist  
 (11) Railway train  
 (12) Animal  
 (13) Motor vehicle in transport (same roadway)  
 (14) Motor vehicle in transport (other roadway)  
 (15) Parked motor vehicle  
 (16) Other type nonmotorist (specify):  
 (17) Thrown or falling object  
 (18) Boulder  
 Collision with Fixed Object:  
 (20) Building  
 (21) Impact attenuator/Crash Cushion  
 (22) Bridge pier or abutment  
 (23) Bridge parapet end  
 (24) Bridge rail  
 (25) Guardrail  
 (26) Concrete traffic barrier  
 (27) Median barrier  
 (28) Other longitudinal barrier (specify):  
 (29) Highway/Traffic sign post  
 (30) Overhead sign support  
 (31) Luminaire/Light support  
 (32) Utility pole  
 (33) Other post, pole, or support (specify):  
 (34) Culvert  
 (35) Curb  
 (36) Ditch  
 (37) Embankment-earth  
 (38) Embankment-rock, stone or concrete  
 (39) Fence (wooden, wire, chain link, etc.)  
 (40) Wall (stone, rock, metal, etc.)  
 (41) Fire hydrant  
 (42) Shrubbery  
 (43) Tree  
 (44) Other fixed object (specify):  
 (45) Pavement surface irregularity (pothole, grooved, grates)  
 (99) Unknown

IRBAG VEHICLE IMPACT SUMMARY

VEHICLE ROLE

- (0) Non-collision
- (1) Striking Unit
- (2) Struck Unit
- (3) Both Striking and Struck
- (9) Unknown

MANNER OF LEAVING SCENE

- (1) Driven
- (2) Towed-due to damage
- (3) Towed - not for damage
- (4) Towed - details unknown
- (5) Abandoned
- (9) Unknown

NUMBER OF IMPACT EVENTS

- (8) 8 or more, (9) Unknown

- ROLLOVER (0) No Rollover
- (1) First Event
  - (2) Subsequent Event
  - (3) Yes,UnknownEvent
  - (9) Unknown

VERRIDE/UNDERRIDE

- (1) No over/underride
- (1) Override - 1st CDC
- (3) - Other CDC
- (4) Underride - 1st CDC
- (5) - Other CDC
- (9) Unknown

IRBAG VEHICLE DAMAGE

- CODES: (1) Yes, DAMAGED
- (2) No Damage
  - (9) Unknown

LEFT FRONT FENDER DAMAGE

RIGHT FRONT FENDER DAMAGE

ENTER TOP OF GRILLE DAMAGE

FRONT BUMPER E.A. STATUS: Left

- (1) Normal Right
- (2) Extended
- (3) Partial Compression
- (4) Complete Compression
- (5) Not Applicable
- (9) Unknown

FIRST AIRBAG VEHICLE IMPACT:

CONFIGURATION

- (0) Struck Object or Pedestrian
- (1) Rear-End
- (2) Head-On
- (3) Rear-to-Rear
- (4) Angle
- (5) Sideswipe - Same Direction
- (6) Sideswipe-Opposite Direct.
- (7) NonCollision Fell from Veh
- (8) NonImpact Deployment
- (9) Unknown

CDC 12 - F L E S - 9

OBJECT CONTACTED: TOYOTA COROLLA

PRIMARY/DEPLOYMENT IMPACT:

EVENT NUMBER

TOTAL DELTA-V

LONGITUDINAL DELTA-V

CONFIGURATION

- (0) Struck Object or Pedestrian
- (1) Rear-End
- (2) Head-On
- (3) Rear-to-Rear
- (4) Angle
- (5) Sideswipe - Same Direction
- (6) Sideswipe-Opposite Direct.
- (7) NonCollision Fell from Veh
- (8) NonImpact Deployment
- (9) Unknown

CDC 12 - F L E S - 9

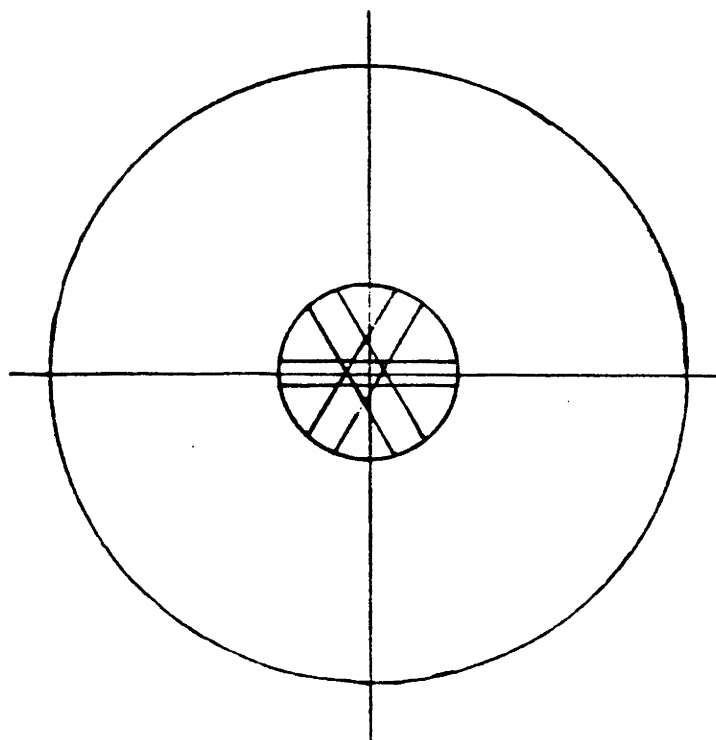
OBJECT CONTACTED: TOYOTA COROLLA

NOTES:

<b>AIRBAG SYSTEM DAMAGE</b>  <b>CODES:</b> (1) Yes, Damaged* (2) No, Intact (8) Not App. (Removed) (9) Unknown  <b>AIRBAG MODULE</b>  <b>SENSORS:</b> Left Front Center Front Right Front Rear, Cowl  <b>DIAGNOSTIC MODULE</b>  <b>WIRING</b>  <b>KNEE DIVERTER</b>  <b>INDICATION OF DISCONNECTED OR LOOSE ELECTRICAL CONNECTORS</b>	<u>2</u> <u>2</u> <u>8</u> <u>2</u> <u>2</u> <u>2</u> <u>2</u> <u>2</u>	<b>CONDITION OF DEPLOYED BAG</b>  (1) Bag Intact (2) Split or Torn* (3) Cut by Object in Impact* (4) Cut after Accident* (5) Other (e.g., burned)* (8) N/A (not deployed) (9) Unknown  <b>*DESCRIBE System and Bag Damage:</b>        	<u>1</u>
---	--	--	----------

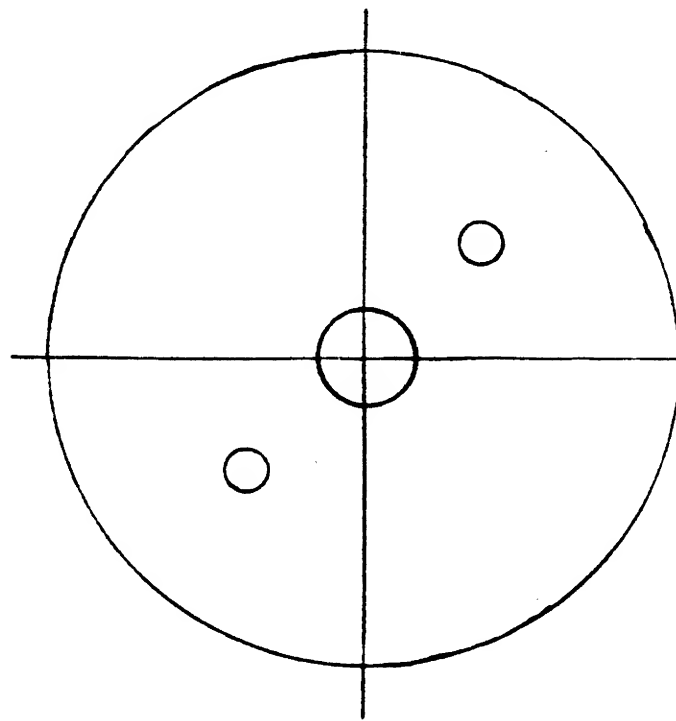
NOTE DAMAGE AND CONTACT MARKS ON AIRBAG DIAGRAMS BELOW:

NO EVIDENCE OF  
CONTACT



FRONT

TOP



BOTTOM

BACK

## OCCUPANTS/DRIVER

AIRBAG SUPPLEMENT AB-5

## OCCUPANTS of AIRBAG CAR

NUMBER OF OCCUPANTS IN VEHICLE  
(8) 8 or more

NUMBER OF INJURED PERSONS

MAXIMUM AIS IN AIRBAG VEHICLE

(0) No Injury

(1-6) AIS Severity

(7) Injured, Unknown Severity

(9) Unknown

## NOTES:

DRIVER AGE 22 SEX F

NUMBER OF DRIVER INJURIES

SOURCE OF BEST INJURY DATA

(0) Not Injured

(1) Autopsy w/wo med. records

(2) Hospital Medical Records

(3) Emergency Room only

(4) Private physician, Clinic

(5) Lay Coroner Report

(6) EMS Personnel

(7) Interviewee

(8) Police

(9) Unknown

## MAXIMUM AIS BY BODY REGION

REGION	MAX AIS	CONTACT
Head/Neck/Face	<u>1</u>	<u>45</u>
Chest	---	---
Abdomen	---	---
Leg/Hips	---	---
Other (Arms)	---	---
DRIVER MAXIMUM	---	---

Chest

Abdomen

Leg/Hips

Other (Arms)

DRIVER MAXIMUM

EJECTION: Extent NONEPortal N/A

**DRIVER BELT USAGE:** (1) Used (2) Not Used (9) Unknown 1

Evidence: DRIVER INTERVIEW, VEHICLE INSPECTION

**DRIVER POSTURE:** Any Comments Recorded (1) Yes, (2) No 1

Describe driver's posture and position on seat including specific comments on head, torso, buttocks, legs and feet. Also note hand and arm position. Did driver brace before crash? Describe:

LOOKING IN REAR VIEW MIRROR

**DRIVER FOREIGN OBJECTS:** Comments Recorded (1) Yes, (2) No 2

Was driver wearing contact lenses or eyeglasses? Or holding any foreign object at the time of the impact (packages on lap, pipe, food, bottle, cigarette, etc.)? Did any lenses, objects, or jewelry play any role?:

**DRIVER COMMENTS:** Comments Recorded (1) Yes, (2) No 1

Was the driver aware that the vehicle was equipped with a supplemental restraint system? Did driver offer any comments on smoke, noise, etc.? Did the driver comment on the airbag as a restraint system? Describe:

NOTICED SMOKE

**PASSENGER-AIRBAG CONTACT** (1) Yes, (2) No, (9) Unknown 2

Describe: \_\_\_\_\_

APPENDIX C

NASS Vehicle Forms



## GENERAL VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

<p>1. Primary Sampling Unit Number _____</p> <p>2. Case Number — Stratum <u>90-05</u></p> <p>3. Vehicle Number <u>01</u></p> <hr/> <p align="center"><b>VEHICLE IDENTIFICATION</b></p> <p>4. Vehicle Model Year <u>89</u> Code the last two digits of the model year (99) Unknown</p> <p>5. Vehicle Make (specify): <u>07</u> <u>DODGE</u> Applicable codes are found in your NASS CDS Data Collection, Coding, and Editing Manual. (99) Unknown</p> <p>6. Vehicle Model (specify): <u>015</u> <u>DAYTONA</u> Applicable codes are found in your NASS CDS Data Collection, Coding, and Editing Manual. (999) Unknown</p> <p>7. Body Type <u>03</u> Note: Applicable codes are found on the back of this page.</p> <p>8. Vehicle Identification Number <u>1B3XG4YK3K6</u> [REDACTED] Left justify; Slash zeros and letter Z (0 and Z) No VIN—Code all zeros Unknown—Code all nine's</p> <hr/> <p align="center"><b>OFFICIAL RECORDS</b></p> <p>9. Police Reported Vehicle Disposition <u>1</u> (0) Not towed due to vehicle damage (1) Towed due to vehicle damage (9) Unknown</p> <p>10. Police Reported Travel Speed <u>99</u> Code to the nearest mph (NOTE: 00 means less than 0.5 mph) (97) 96.5 mph and above (99) Unknown</p>	<p>11. Police Reported Alcohol or Drug Presence <u>0</u> (0) Neither alcohol nor drugs present (1) Yes (alcohol present) (2) Yes (drugs present) (3) Yes (alcohol and drugs present) (4) Yes (alcohol or drugs present—specifics unknown) (7) Not reported (8) No driver present (9) Unknown</p> <p>12. Alcohol Test Result for Driver <u>96</u> Code actual value (decimal implied before first digit—0.xx) (95) Test refused (96) None given (97) AC test performed, results unknown (98) No driver present (99) Unknown</p> <p>Source _____</p> <hr/> <p align="center"><b>ACCIDENT RELATED</b></p> <p>13. Speed Limit <u>50</u> (00) No statutory limit Code posted or statutory speed limit (99) Unknown</p> <p>14. Attempted Avoidance Maneuver <u>01</u> (00) No impact (01) No avoidance actions (02) Braking (no lockup) (03) Braking (lockup) (04) Braking (lockup unknown) (05) Releasing brakes (06) Steering left (07) Steering right (08) Braking and steering left (09) Braking and steering right (10) Accelerating (11) Accelerating and steering left (12) Accelerating and steering right (97) No driver present (98) Other action (specify): _____ (99) Unknown</p> <p>15. Accident Type <u>64</u> Applicable codes may be found on the back of page two of this field form (00) No impact Code the number of the diagram that best describes the accident circumstance (98) Other accident type (specify): _____ (99) Unknown</p>
---	--

## CODES FOR BODY TYPE

### CDS APPLICABLE VEHICLES

#### Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (08) Other automobile type (specify): \_\_\_\_\_

- (09) Unknown automobile type

#### Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, and Brat)
- (11) Auto based panel (cargo station wagon, includes auto based ambulance/hearse)
- (12) Large limousine—more than four side doors or stretched chassis

#### Utility Vehicles

- (13) Short utility—not truck based (includes Jeep CJ-5, Jeep CJ-7, Renegade, Landrover, Pre-78 Bronco, Landcruiser, Thing)
- (14) Truck based utility (2-door; includes Blazer, Bronco—78 on, Bronco II, Jimmy, Ramcharger, Cherokee, Trailduster, Scout)

#### Van Based Light Trucks (< 10,000 lbs GVWR)

- (20) Minivan (Lumina APV, Astro, Caravan, Plymouth Vista, Aerostar, Safari, Voyager [84 and after], Dodge Vista, Mini Ram Van, Toyota Cargo Van, Toyota Van, Vanagon, VW Bus, Kombi)
- (21) Standard van (Sportvan, Chevy Van, Club Wagon, Ford Econoline, Ram Van, Chateau, Ram Wagon, Vandura, Rally, Voyager [83 and before], Beauville, Sportsman)
- (28) Other van type (specify): \_\_\_\_\_
- (29) Unknown van type

#### Light Conventional Trucks (Pickup Style Cab, < 10,000 lbs GVWR)

- (30) Compact pickup (< 4,500 lbs. GVWR, S-10, LUV, Ram 50, Rampage, Courier, Ranger, S-15 Pup, Mazda Pickup, Mitsubishi Truck, Nissan Pickup, Arrow Pickup, Scamp, Toyota Pickup, VW Pickup)
- (31) Standard pickup (4,500 to 10,000 lbs. GVWR, C10 - C30, K10 - K30, T10, D100 - D350, W150 - W350, F100 - F350, Comanche, J10 - J30, Dakota)
- (32) Pickup with slide-in camper
- (33) Truck based station wagon (4-door; includes Suburban, Travelall, Wagoneer)
- (34) Light truck based suburban limousine
- (35) Convertible pickup
- (39) Unknown (pickup style) light conventional truck type

#### Other Light Trucks (< 10,000 lbs GVWR)

- (40) Cab chassis based (includes rescue vehicle, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (47) Other light conventional truck type (not a pickup) (specify): \_\_\_\_\_
- (48) Unknown other light truck type (not a pickup)
- (49) Unknown light vehicle type (automobile, van, or light truck)

### OTHER VEHICLES

#### Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify): \_\_\_\_\_
- (59) Unknown bus type

#### Medium/Heavy Trucks (> 10,000 lbs GVWR)

- (60) Step van
- (61) Single unit straight truck (10,000 lbs < GVWR < 26,000 lbs)
- (62) Single unit straight truck (> 26,000 lbs GVWR)
- (63) Medium/heavy truck based motorhome
- (64) Truck-tractor with no cargo trailer
- (65) Truck-tractor pulling one trailer
- (66) Truck-tractor pulling two or more trailers
- (67) Truck-tractor (unknown if pulling trailer)
- (68) Unknown medium/heavy truck type
- (69) Unknown truck type (light/medium/heavy)

#### Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (70) Motorcycle
- (71) Moped (motorized bicycle)
- (78) Other motored cycle type (minibike, motorscooter) (specify): \_\_\_\_\_

- (79) Unknown motored cycle type

#### Other Vehicles

- (80) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (88) Other vehicle type (specify): \_\_\_\_\_

- (99) Unknown body type

**OCCUPANT RELATED**

16. Driver Presence in Vehicle 1  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
17. Number of Occupants This Vehicle 01  
 (00-96) Code actual number of occupants for this vehicle  
 (97) 97 or more  
 (99) Unknown
18. Number of Occupant Forms Submitted 01

**VEHICLE WEIGHT ITEMS**

19. Vehicle Curb Weight 02,800  
2251 Code weight to nearest 100 pounds.  
 (010) Less than 1050 pounds  
 (135) 13,500 lbs or more  
 (999) Unknown
- Source: \_\_\_\_\_
20. Vehicle Cargo Weight 0000  
 \_\_\_\_\_ Code weight to nearest 100 pounds.  
 (00) Less than 50 pounds  
 (97) 9,650 lbs or more  
 (99) Unknown

**RECONSTRUCTION DATA**

21. Towed Trailing Unit 0  
 (0) No towed unit  
 (1) Yes – towed trailing unit  
 (9) Unknown
22. Documentation of Trajectory Data for This Vehicle 0  
 (0) No  
 (1) Yes
23. Post Collision Condition of Tree or Pole (for Highest Delta V) 0  
 (0) Not collision (for highest delta V) with tree or pole  
 (1) Not damaged  
 (2) Cracked/sheared  
 (3) Tilted <45 degrees  
 (4) Tilted ≥45 degrees  
 (5) Uprooted tree  
 (6) Separated pole from base  
 (7) Pole replaced  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

24. Rollover 0  
 (0) No rollover (no overturning)
- Rollover (primarily about the longitudinal axis)  
 (1) Rollover, 1 quarter turn only  
 (2) Rollover, 2 quarter turns  
 (3) Rollover, 3 quarter turns  
 (4) Rollover, 4 or more quarter turns (specify): \_\_\_\_\_
- (5) Rollover – end-over-end (i.e., primarily about the lateral axis)  
 (9) Rollover (overturn), details unknown

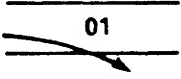
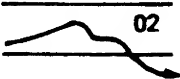
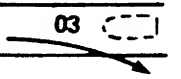
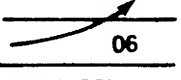
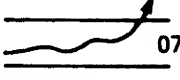
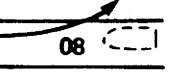
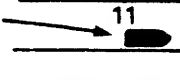
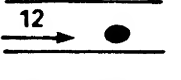
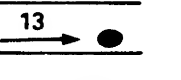
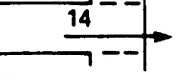
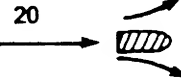
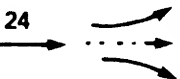
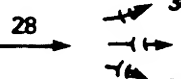


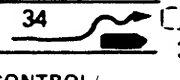
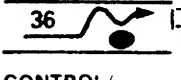
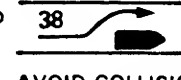
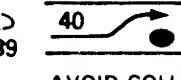
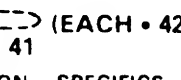
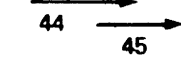
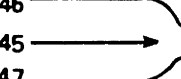


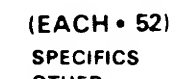

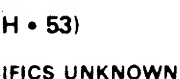

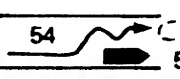
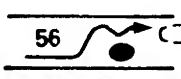
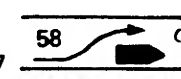
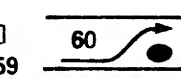
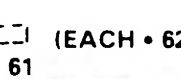
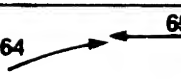
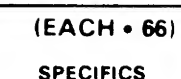

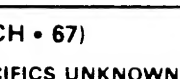

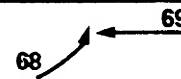


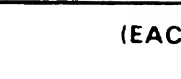
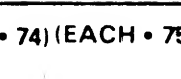
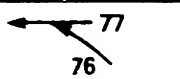
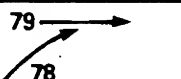
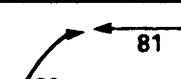
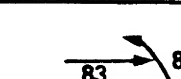

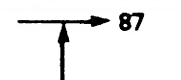
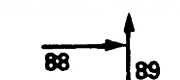

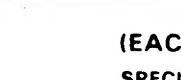

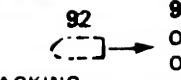


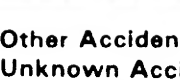

**OVERRIDE/UNDERRIDE (THIS VEHICLE)**

25. Front Override/Underride (this vehicle) 0
26. Rear Override/Underride (this vehicle) 0
- (0) No override/underride, or not an end-to-end impact
- Override (see specific CDC)  
 (1) 1st CDC  
 (2) 2nd CDC  
 (3) Other not automated CDC (specify): \_\_\_\_\_
- Underride (see specific CDC)  
 (4) 1st CDC  
 (5) 2nd CDC  
 (6) Other not automated CDC (specify): \_\_\_\_\_
- (7) Medium/heavy truck override  
 (9) Unknown

**HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V**

Values: (000)-(359) Code actual value  
 (997) Noncollision  
 (998) Impact with object  
 (999) Unknown

27. Heading Angle for This Vehicle 355
28. Heading Angle for Other Vehicle 180

Category	Configuration	ACCIDENT TYPES (Includes Intent)				
I. Single Driver	A Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN
	B Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN
	C Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER 16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D Rear-End	 20 STOPPED 21, 22, 23	 24 SLOWER 26, 26, 27	 28 DECEL. 29, 30, 31	 30 SPECIFICS OTHER	 31 SPECIFICS UNKNOWN
	E Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	 41 SPECIFICS OTHER (EACH • 42) (EACH • 43)
	F Sideswipe Angle	 44 SPECIFICS OTHER	 46 SPECIFICS OTHER	 47 SPECIFICS OTHER	(EACH • 48) SPECIFICS OTHER	(EACH • 49) SPECIFICS UNKNOWN
III Same Trafficway Opposite Direction	G Head-On	 50 LATERAL MOVE	 51 (EACH • 52) SPECIFICS OTHER	 52 (EACH • 53) SPECIFICS UNKNOWN	 53 SPECIFICS UNKNOWN	 54 SPECIFICS UNKNOWN
	H Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEH.	 60 AVOID COLLISION WITH OBJECT	 61 SPECIFICS OTHER (EACH • 62) (EACH • 63)
	I Sideswipe Angle	 64 LATERAL MOVE	 65 (EACH • 66) SPECIFICS OTHER	 66 (EACH • 67) SPECIFICS UNKNOWN	 67 SPECIFICS UNKNOWN	 68 SPECIFICS UNKNOWN
IV. Change Trafficway Vehicle Turning	J. Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 70 INITIAL SAME DIRECTIONS	 72 SPECIFICS OTHER	 73 SPECIFICS UNKNOWN	 74 SPECIFICS UNKNOWN
	K. Turn Into Path	 76 TURN INTO SAME DIRECTION	 78 TURN INTO OPPOSITE DIRECTIONS	 80 SPECIFICS OTHER	 82 SPECIFICS UNKNOWN	 83 SPECIFICS UNKNOWN
V Intersect- ing Paths (Vehicle Damage)	L. Straight Paths	 86 SPECIFICS OTHER	 88 SPECIFICS OTHER	 89 (EACH • 90) SPECIFICS OTHER	 90 (EACH • 91) SPECIFICS UNKNOWN	 91 SPECIFICS UNKNOWN
VI. Miscel- laneous	M. Backing Etc	 92 BACKING VEH.	 93 OTHER VEH. OR OBJECT	 94 SPECIFICS OTHER	 95 SPECIFICS UNKNOWN	 96 SPECIFICS UNKNOWN

## 29. Basis for Total Delta V (Highest)

5

## Delta V Calculated

- (1) CRASH program – damage only routine
- (2) CRASH program – damage and trajectory routine
- (3) Missing vehicle algorithm

## Delta V Not Calculated

- (4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
- (5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction techniques, regardless of adequacy of damage data.
- (6) All vehicles and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

**COMPUTER GENERATED DELTA V**

## 30. Total Delta V

Secondary Highest

99

\_\_\_\_ Nearest mph

(NOTE: 00 means less than  
0.5 mph)  
(97) 96.5 mph and above  
(99) Unknown

## 31. Longitudinal Component of Delta V

+ 99

\_\_\_\_ Nearest mph

(NOTE: \_\_00 means greater than  
- 0.5 and less than + 0.5 mph)  
(± 97) ± 96.5 mph and above  
(\_\_ 99) Unknown

## 32. Lateral Component of Delta V

Secondary Highest

+ 99

\_\_\_\_ Nearest mph

(NOTE: \_\_00 means greater than  
- 0.5 and less than + 0.5 mph)  
(± 97) ± 96.5 mph and above  
(\_\_ 99) Unknown

## 33. Energy Absorption

999,900

\_\_\_\_ Nearest 100 foot-lbs

(NOTE: 0000 means less than 50 Foot-Lbs)  
(9997) 999,650 foot-lbs or more  
(9999) Unknown

## 34. Confidence in Reconstruction Program Results (for Highest Delta V)

0

- (0) No reconstruction
- (1) Collision fits model – results appear reasonable
- (2) Collision fits model – results appear high
- (3) Collision fits model – results appear low
- (4) Borderline reconstruction – results appear reasonable

## 35. Type of Vehicle Inspection

- (0) No inspection
- (1) Complete inspection
- (2) Partial inspection (specify):

## 36. Is this an AOPS Vehicle?

- (0) No
- (1) Yes

\*\*\* STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35 = 0), \*\*\*  
DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

## EXTERIOR VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number	3. Vehicle Number
2. Case Number - <del>Stratum</del> <u>90-05</u>	<u>01</u>

## VEHICLE IDENTIFICATION

VIN 1B3XG44K3K6 [REDACTED] Model Year 1989  
Vehicle Make (specify): DODGE Vehicle Model (specify): DAYTONA

## LOCATOR

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L
1	LEFT FRONT CORNER AREA	LEFT SIDE SURFACE, NO FRONTAL CRUSH

## CRUSH PROFILE

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Measure and document on the vehicle diagram the location of maximum crush.

Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

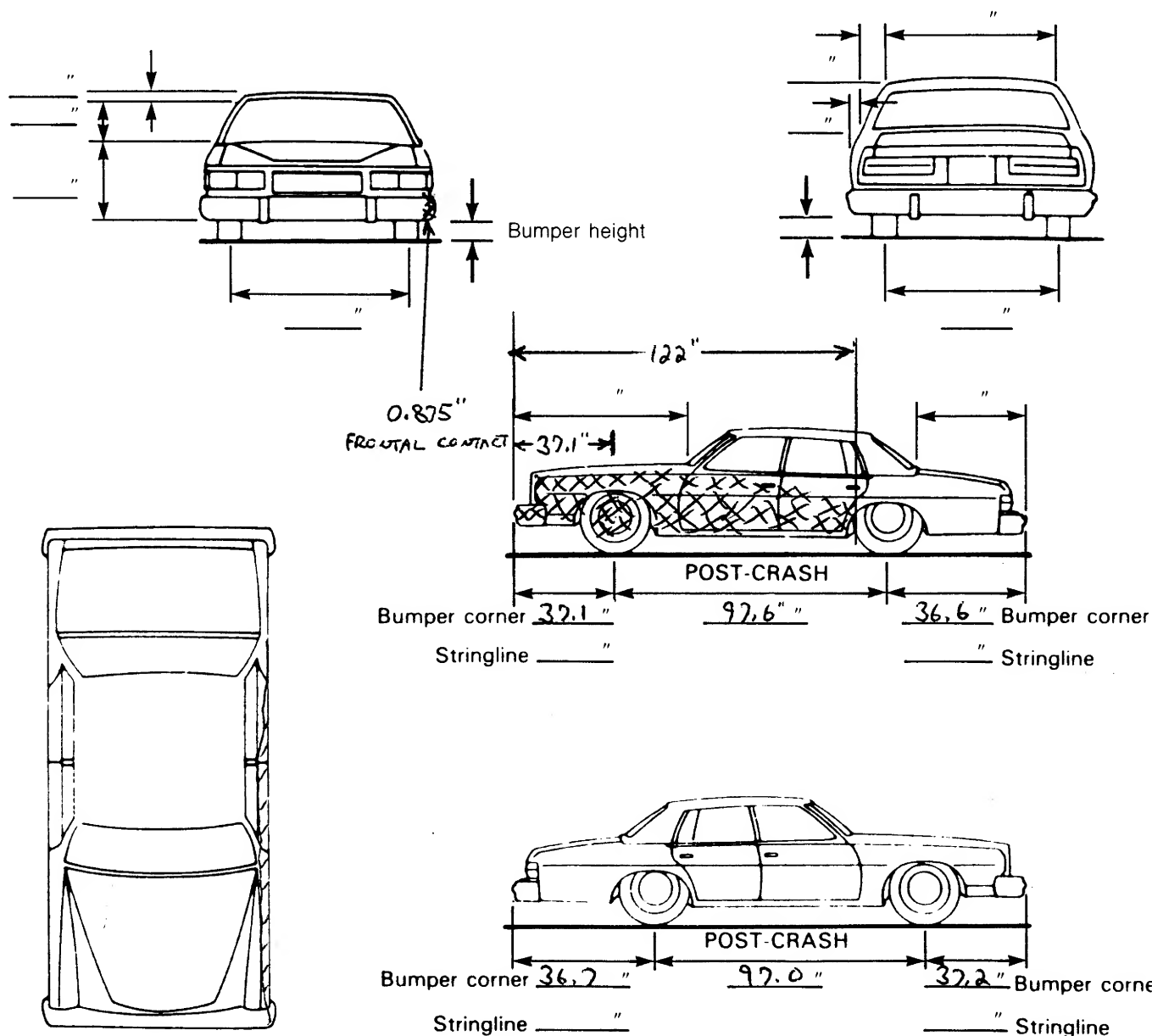
Use as many lines/columns as necessary to describe each damage profile.

[illegible]



## VEHICLE DAMAGE SKETCH

<b>TIRE – WHEEL DAMAGE</b> a. Rotation physically restricted RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.		<b>ORIGINAL SPECIFICATIONS</b> Wheelbase <u>97.0</u> Overall Length <u>175.0</u> Maximum Width <u>69.3</u> Curb Weight <u>2751</u> Average Track <u>57.6</u> Front Overhang _____ Rear Overhang _____ Engine Size: cyl./ displ. <u>4/2.5L</u> Undeformed End Width _____		<b>WHEEL STEER ANGLES</b> (For locked front wheels or displaced rear axles only) RF ± _____° LF ± _____° RR ± _____° LR ± _____° Within ± 5 degrees
<b>TYPE OF TRANSMISSION</b> <input checked="" type="checkbox"/> Manual <u>5-SPD</u> <input type="checkbox"/> Automatic		<b>DRIVE WHEELS</b> <input checked="" type="checkbox"/> FWD <input type="checkbox"/> RWD <input type="checkbox"/> 4WD		
		Approximate Cargo Weight <u>N/A</u>		



NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewall, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

## CDC WORKSHEET

## CODES FOR OBJECT CONTACTED

## 01-30 – Vehicle Number

## Noncollision

- (31) Overturn – rollover  
 (32) Fire or explosion  
 (33) Jackknife  
 (34) Other intraunit damage (specify):  
 \_\_\_\_\_

- (35) Noncollision injury  
 (38) Other noncollision (specify):  
 \_\_\_\_\_

## (39) Noncollision – details unknown

## Collision with Fixed Object

- (41) Tree ( $\leq 4$  inches in diameter)  
 (42) Tree ( $> 4$  inches in diameter)  
 (43) Shrubbery or bush  
 (44) Embankment

## (45) Breakaway pole or post (any diameter)

## Nonbreakaway Pole or Post

- (50) Pole or post ( $\leq 4$  inches in diameter)  
 (51) Pole or post ( $> 4$  but  $\leq 12$  inches in diameter)  
 (52) Pole or post ( $> 12$  inches in diameter)  
 (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier  
 (55) Impact attenuator  
 (56) Other traffic barrier (specify):  
 \_\_\_\_\_

- (57) Fence  
 (58) Wall  
 (59) Building  
 (60) Ditch or Culvert  
 (61) Ground  
 (62) Fire hydrant  
 (63) Curb  
 (64) Bridge  
 (68) Other fixed object (specify):  
 \_\_\_\_\_

## (69) Unknown fixed object

## Collision With Nonfixed Object

- (71) Motor vehicle not in transport  
 (72) Pedestrian  
 (73) Cyclist or cycle  
 (74) Other nonmotorist or conveyance (specify):  
 \_\_\_\_\_

- (75) Vehicle occupant  
 (76) Animal  
 (77) Train  
 (78) Trailer, disconnected in transport  
 (88) Other nonfixed object (specify):  
 \_\_\_\_\_

## (89) Unknown nonfixed object

(98) Other event (specify):  
 \_\_\_\_\_

## (99) Unknown event or object

## DEFORMATION CLASSIFICATION BY EVENT NUMBER

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
01	02	000	00	F	L	E	S	09
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—

**COLLISION DEFORMATION CLASSIFICATION****HIGHEST DELTA "V"**

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>01</u>	5. <u>02</u>	6. <u>12</u>	7. <u>E</u>	8. <u>L</u>	9. <u>E</u>	10. <u>S</u>	11. <u>09</u>

**Second Highest Delta "V"**

12. <u>   </u>	13. <u>   </u>	14. <u>   </u>	15. <u>   </u>	16. <u>   </u>	17. <u>   </u>	18. <u>   </u>	19. <u>   </u>
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**CRUSH PROFILE**

(The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. ALL MEASUREMENTS ARE IN INCHES.)

**HIGHEST DELTA "V"**

20. <u>L</u>	21. <u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>C5</u>	<u>C6</u>	22. + - D
<u>122</u>	<u>00</u>	<u>01</u>	<u>03</u>	<u>03</u>	<u>02</u>	<u>02</u>	<u>025</u>

**Second Highest Delta "V"**

23. <u>L</u>	24. <u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>C5</u>	<u>C6</u>	25. + - D
<u>   </u>	<u>   </u>	<u>   </u>	<u>   </u>	<u>   </u>	<u>   </u>	<u>   </u>	<u>   </u>

26. Are CDCs Documented but Not Coded on The Automated File 0

(0) No  
(1) Yes

27. Researcher's Assessment of Vehicle Disposition 1

(0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

28. Original Wheelbase 092.0  
92.0 Code to the nearest tenth of an inch  
(9999) Unknown

\*\*\* STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED \*\*\*  
(I.E., GV09 = 0 OR 9), DO NOT COMPLETE THE INTERIOR VEHICLE FORM.

U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

# INTERIOR VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

2. Case Number — Stratum

3. Vehicle Number

## INTEGRITY

4. Passenger Compartment Integrity

(00) No integrity loss

Yes, Integrity Was Lost Through

(01) Windshield

(02) Door (side)

(03) Door/hatch (rear)

(04) Roof

(05) Roof glass

(06) Side window

(07) Rear window

(08) Roof and roof glass

(09) Windshield and door (side)

(10) Windshield and roof

(11) Side and rear window

(98) Other combination of above (specify):

(99) Unknown

## Door, Tailgate Or Hatch Opening

5. LF 3 6. RF 1 7. LR 0 8. RR 0 9. TG/H 1

(0) No door/gate/hatch

(1) Door/gate/hatch remained closed and operational

(2) Door/gate/hatch came open during collision

(3) Door/gate/hatch jammed shut

(8) Other (specify):

(9) Unknown

## Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision: If IV05-IV09 = 2, Then Code 0

10. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

(0) No door/gate/hatch or door not opened

Door, Tailgate, or Hatch Came Open During Collision

(1) Door operational (no damage)

(2) Latch/striker failure due to damage

(3) Hinge failure due to damage

(4) Door structure failure due to damage

(5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage

(6) Latch/striker and hinge failure due to damage

(8) Other failure (specify):

(9) Unknown

## GLAZING

### Glazing Damage from Impact Forces

15. WS 0 16. LF 0 17. RF 0 18. LR 0 19. RR 0  
20. BL 0 21. Roof 0 22. Other 8

(0) No glazing damage from impact forces

(2) Glazing in place and cracked from impact forces

(3) Glazing in place and holed from impact forces

(4) Glazing out-of-place (cracked or not) and not holed from impact forces

(5) Glazing out-of-place and holed from impact forces

(6) Glazing disintegrated from impact forces

(7) Glazing removed prior to accident

(8) No glazing

(9) Unknown if damaged

### Glazing Damage from Occupant Contact

23. WS 0 24. LF 0 25. RF 0 26. LR 0 27. RR 0  
28. BL 0 29. Roof 0 30. Other 0

(0) No occupant contact to glazing or no glazing

(1) Glazing contacted by occupant but no glazing damage

(2) Glazing in place and cracked by occupant contact

(3) Glazing in place and holed by occupant contact

(4) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact

(5) Glazing out-of-place by occupant contact and holed by occupant contact

(6) Glazing disintegrated by occupant contact

(9) Unknown if contacted by occupant

If No Glazing Damage **And** No Occupant Contact or No Glazing, Then Code IV 31 Through IV 46 As 0

### Type of Window/Windshield Glazing

36. BL 0 37. Roof 0 38. Other 0

(0) No glazing contact and no damage, or no glazing

(1) AS-1 — Laminated

(2) AS-2 — Tempered

(3) AS-3 — Tempered-tinted

(4) AS-14 — Glass/Plastic

(8) Other (specify):

(9) Unknown

### Window Pre-crash Glazing Status

39. WS 0 40. LF 0 41. RF 0 42. LR 0 43. RR 0  
44. BL 0 45. Roof 0 46. Other 0

(0) No glazing contact and no damage, or no glazing

(1) Fixed

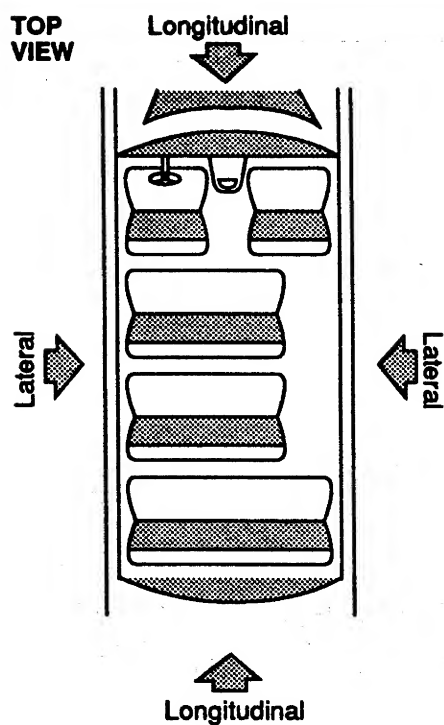
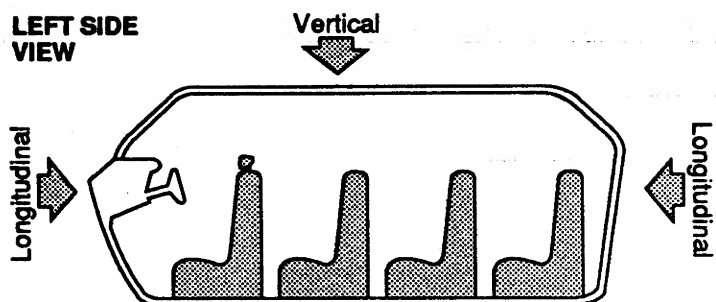
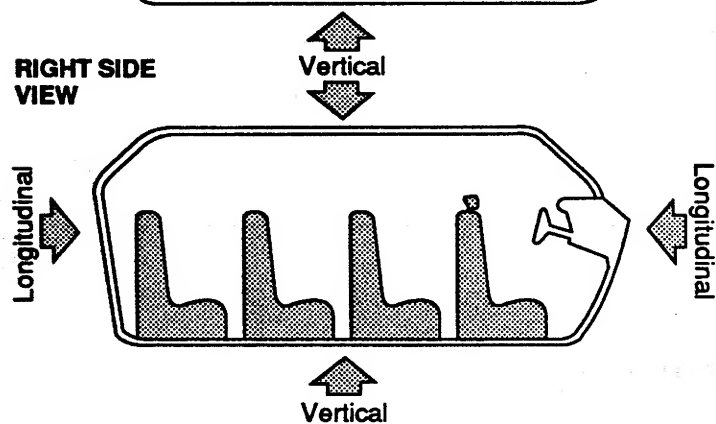
(2) Closed

(3) Partially opened

(4) Fully opened

(9) Unknown

## INTRUSION WORK SHEET

TOP  
VIEWLEFT SIDE  
VIEWRIGHT SIDE  
VIEW

Note: Sketch intruded areas

LOCATION OF INTRUSION	INTRUDED COMPONENT	COMPARISON VALUE	-	INTRUDED VALUE	=	INTRUSION	DOMINANT CRUSH DIRECTION
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		

Document no more than the 15 most severe intrusions

## OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV 47-IV 86 blank.

## INTRUDING COMPONENT

## Interior Components

- (01) Steering assembly
- (02) Instrument panel left
- (03) Instrument panel center
- (04) Instrument panel right
- (05) Toe pan
- (06) A-pillar
- (07) B-pillar
- (08) C-pillar
- (09) D-pillar
- (10) Door panel
- (12) Roof (or convertible top)
- (13) Roof side rail
- (14) Windshield
- (15) Windshield header
- (16) Window frame
- (17) Floor pan
- (18) Backlight header
- (19) Front seat back
- (20) Second seat back
- (21) Third seat back
- (22) Fourth seat back
- (23) Fifth seat back
- (24) Seat cushion
- (25) Back panel or door surface
- (26) Other interior component (specify): \_\_\_\_\_
- (27) Side panel - forward of the A-pillar
- (28) Side panel - rear of the A-pillar

## Exterior Components

- (30) Hood
- (31) Outside surface of vehicle (specify): \_\_\_\_\_
- (32) Other exterior object in the environment (specify): \_\_\_\_\_
- (33) Unknown exterior object
- (98) Intrusion of unlisted component(s) (specify): \_\_\_\_\_
- (99) Unknown

## MAGNITUDE OF INTRUSION

- (1)  $\geq 1$  inch but  $< 3$  inches
- (2)  $\geq 3$  inches but  $< 6$  inches
- (3)  $\geq 6$  inches but  $< 12$  inches
- (4)  $\geq 12$  inches but  $< 18$  inches
- (5)  $\geq 18$  inches but  $< 24$  inches
- (6)  $\geq 24$  inches
- (9) Unknown

## DOMINANT CRUSH DIRECTION

- (1) Vertical
- (2) Longitudinal
- (3) Lateral
- (9) Unknown

	Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st	47	48	49	50
2nd	51	52	53	54
3rd	55	56	57	58
4th	59	60	61	62
5th	63	64	65	66
6th	67	68	69	70
7th	71	72	73	74
8th	75	76	77	78
9th	79	80	81	82
10th	83	84	85	86

## LOCATION OF INTRUSION

## Front Seat

- (11) Left
- (12) Middle
- (13) Right

## Second Seat

- (21) Left
- (22) Middle
- (23) Right

## Third Seat

- (31) Left
- (32) Middle
- (33) Right

## Fourth Seat

- (41) Left
- (42) Middle
- (43) Right

(98) Other enclosed area (specify): \_\_\_\_\_

(99) Unknown

NO INTRUSION



# STEERING COLUMN WORKING DIAGRAMS

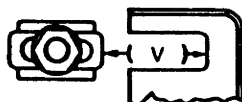
## STEERING COLUMN COLLAPSE

Steering Column Shear Module Movement



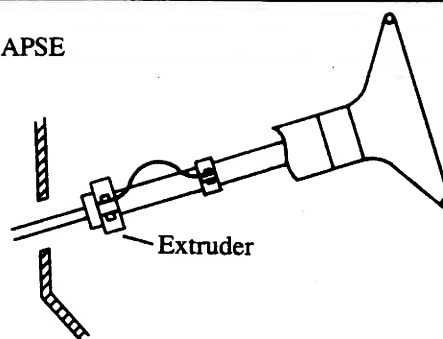
SHEAR CAPSULE

Left \_\_\_\_



Right \_\_\_\_ V = \_\_\_\_"

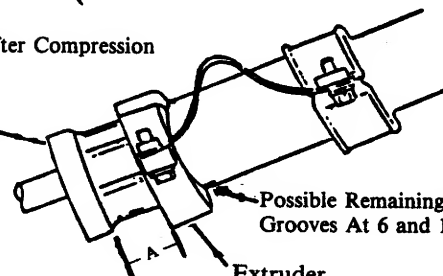
Direction and Magnitude of Steering Column Movement



Extruder

After Compression

Flare Tube



Possible Remaining Starter Grooves At 6 and 12 o'clock

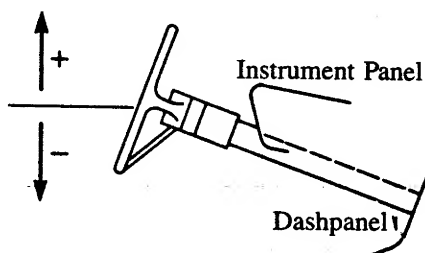
Extruder

Compression = Measurement A

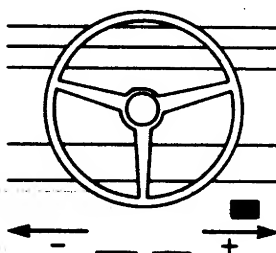
A = \_\_\_\_

## STEERING COLUMN MOVEMENT

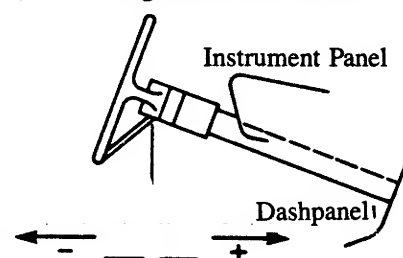
Vertical Movement



Lateral Movement



Longitudinal Movement



	COMPARISON VALUE	—	DAMAGED VALUE	=	MOVEMENT
VERTICAL		—		=	
LATERAL		—		=	
LONGITUDINAL		—		=	

## STEERING RIM/SPOKE DEFORMATION

COMPARISON VALUE	—	DAMAGED VALUE	=	DEFORMATION
	—		=	
	—		=	

**STEERING COLUMN****87. Steering Column Type**2

- (1) Fixed column  
 (2) Tilt column  
 (3) Telescoping column  
 (4) Tilt and telescoping column  
 (8) Other column type (specify):  
 \_\_\_\_\_

(9) Unknown

If PDOF  $\neq$  11, 12 or 1, Then Code IV88-IV91 As 96**88. Steering Column Collapse Due to Occupant Loading**01

\_\_\_\_\_ Code actual measured movement to the nearest inch. See coding manual for measurement technique(s).

- (00) No movement, compression, or collapse  
 (01-49) Actual measured value  
 (50) 50 inches or greater

Estimated movement from observation

- (81) Less than 1 inch  
 (82)  $\geq$  1 inch but  $<$  2 inches  
 (83)  $\geq$  2 inches but  $<$  4 inches  
 (84)  $\geq$  4 inches but  $<$  6 inches  
 (85)  $\geq$  6 inches but  $<$  8 inches  
 (86) Greater than or equal to 8 inches  
 (96) Not assessed (PDOF  $\neq$  11, 12, 1)  
 (97) Apparent movement, value undetermined or cannot be measured or estimated  
 (98) Nonspecified type column  
 (99) Unknown

**Direction And Magnitude of Steering Column Movement****89. Vertical Movement**+ 00**90. Lateral Movement**+ 00**91. Longitudinal Movement**+ 01

Code the actual measured movement to the nearest inch. See Coding Manual for measurement technique(s)

- (+00) No Steering column movement  
 ( $\pm$ 01 –  $\pm$ 49) Actual measured value  
 ( $\pm$ 50) 50 inches or greater

Estimated movement from observation

- ( $\pm$ 81)  $\geq$  1 inch but  $<$  3 inches  
 ( $\pm$ 82)  $\geq$  3 inches but  $<$  6 inches  
 ( $\pm$ 83)  $\geq$  6 inches but  $<$  12 inches  
 ( $\pm$ 84)  $\geq$  12 inches  
 (\_\_\_96) Not assessed (PDOF  $\neq$  11, 12, 1)  
 (\_\_\_97) Apparent movement  $>$  1 inch but cannot be measured or estimated  
 (\_\_\_99) Unknown

**92. Steering Rim/Spoke Deformation**9

\_\_\_\_\_ Code actual measured deformation to the nearest inch.

- (0) No steering rim deformation  
 (1-5) Actual measured value  
 (6) 6 inches or more  
 (8) Observed deformation cannot be measured  
 (9) Unknown

**93. Location of Steering Rim/Spoke Deformation**01

(00) No steering rim deformation

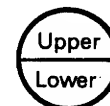
Quarter Sections

- (01) Section A  
 (02) Section B  
 (03) Section C  
 (04) Section D



Half Sections

- (05) Upper half of rim/spoke  
 (06) Lower half of rim/spoke  
 (07) Left half of rim/spoke  
 (08) Right half of rim/spoke



- (09) Complete steering wheel collapse  
 (10) Undetermined location  
 (99) Unknown

**INSTRUMENT PANEL****94. Odometer Reading**023 000

22892 miles – Code mileage to the nearest 1,000 miles

- (000) No odometer  
 (001) Less than 1,500 miles  
 (300) 299,500 miles or more  
 (999) Unknown

Source: \_\_\_\_\_

**95. Instrument Panel Damage from Occupant Contact**0

- (0) No  
 (1) Yes  
 (9) Unknown

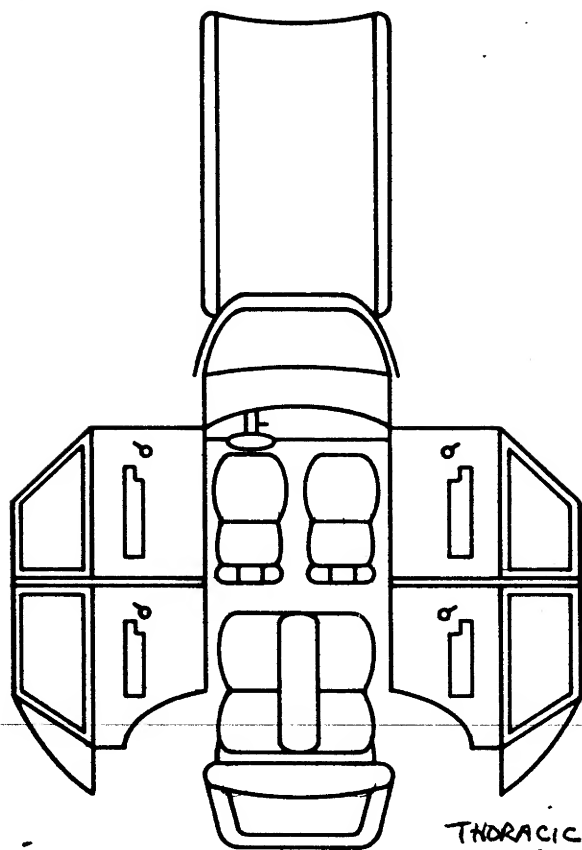
**96. Knee Bolsters Deformed from Occupant Contact**0

- (0) No  
 (1) Yes  
 (8) Not present  
 (9) Unknown

**97. Did Glove Compartment Door Open During Collision(s)**0

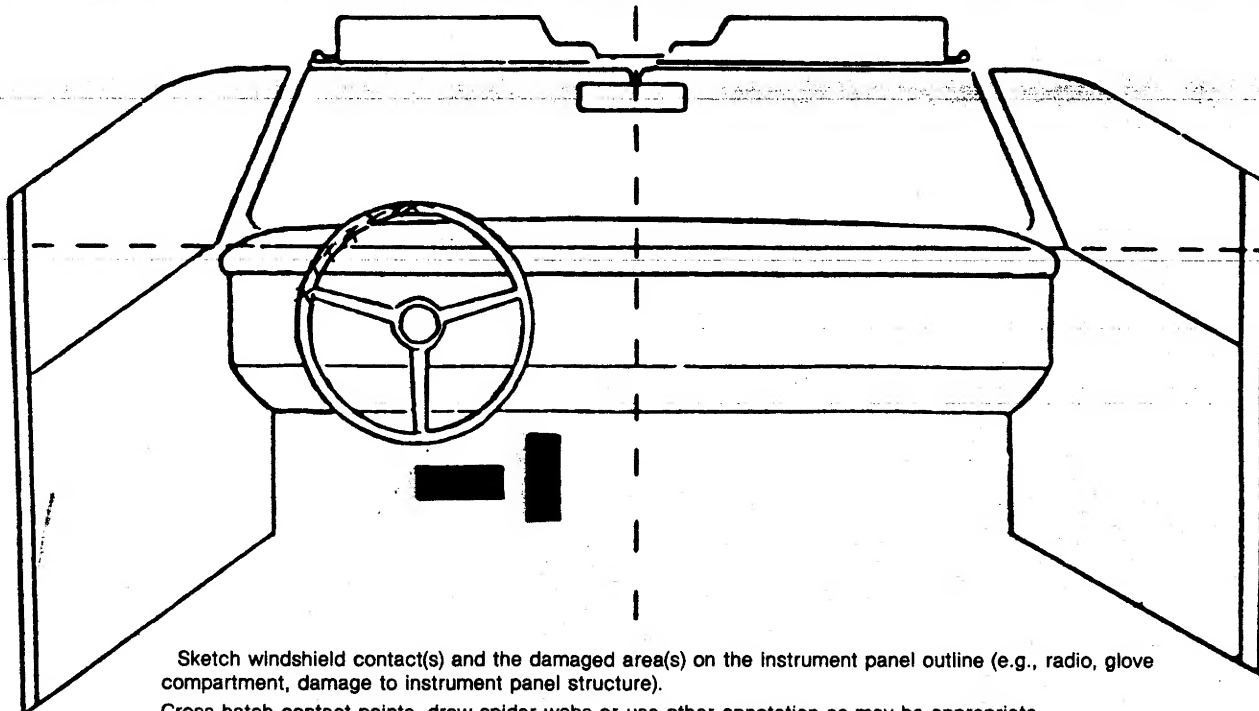
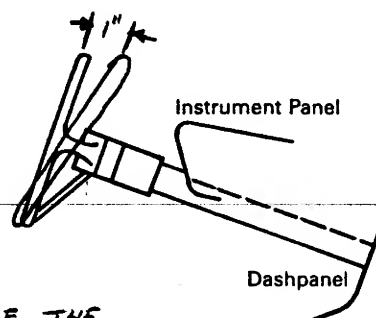
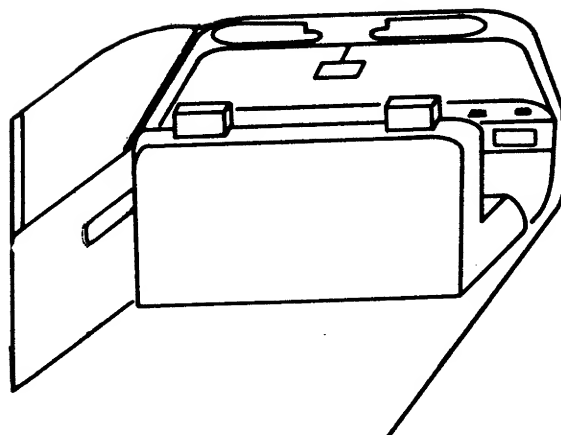
- (0) No  
 (1) Yes  
 (8) Not present  
 (9) Unknown

## VEHICLE INTERIOR SKETCHES



FACIAL CONTACT WITH  
AIR BAG

THORACIC LOADING OF THE  
STEERING WHEEL RIM, 1.1" OF  
SHEAR CASULE SEPARATION, 1"  
OF SPOKE FLANGE DEFORMATION



Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure).

Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.

Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

## POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	45	1	CHEST	FACIAL ABRASIONS	1
B	04	1	CHEST	FLANGE DEFORMATION	1
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					
N					

## CODES FOR INTERIOR COMPONENTS

## FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A-pillar, instrument panel, or mirror (passenger side only)
- (16) Other front object (specify):

- (26) Left side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, or roof side rail
- (27) Other left side object (specify):

- (48) Child safety seat (specify):

- (49) Other interior object (specify):

## RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A pillar
- (33) Right B pillar
- (34) Other right pillar (specify):
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, or roof side rail
- (37) Other right side object (specify):

## ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

## FLOOR

- (56) Floor including toe pan
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

## REAR

- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify):

## INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify):
- (44) Head restraint system
- (45) Air cushion
- (46) Other occupants (specify):
- (47) Interior loose objects

## LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A pillar
- (23) Left B pillar
- (24) Other left pillar (specify):
- (25) Left side window glass or frame

## CONFIDENCE LEVEL OF CONTACT POINT

- (1) Certain
- (2) Probable
- (3) Possible
- (4) Unknown

## AUTOMATIC RESTRAINTS

**NOTES:** Encode the data for each applicable front seat position. The attributes for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
F I R S T	Availability	1		
	Function	4		
	Failure	1		

### Automatic (Passive) Restraint System Availability

- (0) Not equipped/not available
- (1) Airbag
- (2) Airbag disconnected (specify): \_\_\_\_\_
- (3) Airbag not reinstalled
- (4) 2 point automatic belts
- (5) 3 point automatic belts
- (6) Automatic belts destroyed or rendered inoperative
- (9) Unknown

### Automatic (Passive) Restraint Function

- (0) Not equipped/not available

#### Automatic Belt

- (1) Automatic belt in use
- (2) Automatic belt not in use
- (3) Automatic belt use unknown

#### Air Bag

- (4) Airbag deployed during accident
- (5) Airbag deployed inadvertently just prior to accident
- (6) Deployed, accident sequence undetermined
- (7) Nondeployed
- (8) Unknown if deployed
- (9) Unknown

### Did Automatic (Passive) Restraint Fail

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): \_\_\_\_\_
- (9) Unknown

## MANUAL RESTRAINTS

NOTES: Encode the applicable data for each seat position in the vehicle. The attributes for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

If a child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
FIRST	Availability	4	-	4
	Use	04	-	-
	Failure Modes	1	-	-
SECOND	Availability	3	-	3
	Use	-	-	-
	Failure Modes	-	-	-
THIRD	Availability			
	Use			
	Failure Modes			
OTHER	Availability			
	Use			
	Failure Modes			

## Manual (Active) Belt System Availability

- (0) Not available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available – type unknown
- (8) Other belt (specify):

(9) Unknown

(08) Other belt used (specify):

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat – type unknown
- (18) Other belt used with child safety seat (specify):

(99) Unknown if belt used

## Manual (Active) Belt System Use

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify):

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used – type unknown

## Manual (Active) Belt Failure Modes During Accident

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Manual belt failure(s) (encode all that apply above)
  - [A] Torn webbing (stretched webbing not included)
  - [B] Broken buckle or latchplate
  - [C] Upper anchorage separated
  - [D] Other anchorage separated (specify):

- [E] Broken retractor
- [F] Other manual belt failure (specify):

(9) Unknown



**CHILD SAFETY SEAT FIELD ASSESSMENT**

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number						
1. Type of Child Safety Seat						
2. Child Safety Seat Orientation						
3. Child Safety Seat Harness Usage						
4. Child Safety Seat Shield Usage						
5. Child Safety Seat Tether Usage						
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat					

**1. Type of Child Safety Seat**

- (0) No child safety seat
- (1) Infant seat
- (2) Toddler seat
- (3) Convertible seat
- (4) Booster seat
- (7) Other type child safety seat (specify):  
\_\_\_\_\_

- (8) Unknown child safety seat type
- (9) Unknown if child safety seat used

**2. Child Safety Seat Orientation**

- (00) No child safety seat

**Designed for Rear Facing for This Age/Weight**

- (01) Rear facing
- (02) Forward facing
- (03) Other orientation (specify):  
\_\_\_\_\_

- (04) Unknown orientation

**Designed for Forward Facing for This Age/Weight**

- (11) Rear facing
- (12) Forward facing
- (18) Other orientation (specify):  
\_\_\_\_\_

- (19) Unknown orientation

**Unknown Design or Orientation for This Age/Weight, or Unknown Age/Weight**

- (21) Rear facing
- (22) Forward facing
- (28) Other orientation (specify):  
\_\_\_\_\_

- (29) Unknown orientation

- (99) Unknown if child safety seat used

**3. Child Safety Seat Harness Usage****4. Child Safety Seat Shield Usage****5. Child Safety Seat Tether Usage**

Note: Options Below Are Used for Variables 3-5.

- (00) No child safety seat

Not Designed with Harness/Shield/Tether

- (01) After market harness/shield/tether added, not used
- (02) After market harness/shield/tether used
- (03) Child safety seat used, but no after market harness/shield/tether added
- (09) Unknown if harness/shield/tether added or used

Designed with Harness/Shield/Tether

- (11) Harness/shield/tether not used
- (12) Harness/shield/tether used
- (19) Unknown if harness/shield/tether used

Unknown if Designed with Harness/Shield/Tether

- (21) Harness/shield/tether not used
- (22) Harness/shield/tether used
- (29) Unknown if harness/shield/tether used

- (99) Unknown if child safety seat used

**6. Child Safety Seat Make/Model**

(Specify make/model and occupant number)

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## HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for **each seat position** in the vehicle. The attributes for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
FIRST	Head Restraint Type/Damage	3	-	3
	Seat Type	02	-	02
	Seat Performance	1	-	1
SECOND	Head Restraint Type/Damage	0	-	0
	Seat Type	02	-	02
	Seat Performance	1	-	1
THIRD	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
OTHER	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			

## Head Restraint Type/Damage by Occupant at This Occupant Position

- (0) No head restraints
- (1) Integral – no damage
- (2) Integral – damaged during accident
- (3) Adjustable – no damage
- (4) Adjustable – damaged during accident
- (5) Add-on – no damage
- (6) Add-on – damaged during accident
- (8) Other (specify): \_\_\_\_\_
- (9) Unknown

## Seat Type (This Occupant Position)

- (00) No seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., van type)
- (09) Other seat type (specify): \_\_\_\_\_
- (99) Unknown

## Seat Performance (This Occupant Position)

- (0) No seat
- (1) No seat performance failure(s)
- (2) Seat performance failure(s)  
(Encode all that apply)
- [A] Seat adjusters failed
- [B] Seat back folding locks failed
- [C] Seat tracks failed
- [D] Seat anchors failed
- [E] Deformed by impact of passenger from rear
- [F] Deformed by impact of passenger from front
- [G] Deformed by own inertial forces
- [H] Deformed by passenger compartment intrusion  
(specify): \_\_\_\_\_

[I] Other (specify): \_\_\_\_\_

(9) Unknown

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E. UNUSUAL OCCUPANT CONTACT PATTERN)

**EJECTION/ENTRAPMENT DATA**

Complete the following if the researcher has any indications that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

**EJECTION** No [ ] Yes [X]

Describe indications of ejection and body parts involved in partial ejection(s):

---



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Occupant Number						
Ejection						
Ejection Area						
Ejection Medium						
Medium Status						

**Ejection**

- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

**(7) Roof**

- (8) Other area (e.g., back of pickup, etc.) (specify):

(9) Unknown

**(5) Integral structure**

- (8) Other medium (specify):

(9) Unknown

**Ejection Area**

- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear

**Ejection Medium**

- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify):

**Medium Status (Immediately Prior to Impact)**

- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

**ENTRAPMENT** No [X] Yes [ ]

Describe entrapment mechanism: \_\_\_\_\_

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Component(s): \_\_\_\_\_

(Note in vehicle interior diagram)

APPENDIX D

NASS Occupant Forms



## OCCUPANT ASSESSMENT FORM

<p>1. Primary Sampling Unit Number <u>          </u></p> <p>2. Case Number — <del>Stratum</del> <u>90-05</u></p> <p>3. Vehicle Number <u>01</u></p> <p>4. Occupant Number <u>01</u></p> <p style="text-align: center;"><b>OCCUPANT'S CHARACTERISTICS</b></p> <p>5. Occupant's Age <u>22</u> Code actual age at time of accident. (00) Less than one year old (specify by month): _____ (97) 97 years and older (99) Unknown</p> <p>6. Occupant's Sex <u>2</u> (1) Male (2) Female (9) Unknown</p> <p>7. Occupant's Height <u>4'11"</u> <u>59</u> Code actual height to the nearest inch. (99) Unknown</p> <p>8. Occupant's Weight <u>121</u> Code actual weight to the nearest pound. (999) Unknown</p> <p>9. Occupant's Role <u>1</u> (1) Driver (2) Passenger (9) Unknown</p> <p>10. Occupant's Seat Position <u>11</u> Front Seat (11) Left side (12) Middle (13) Right side (14) Other (specify): _____ Second Seat (21) Left side (22) Middle (23) Right side (24) Other (specify): _____ Third Seat (31) Left side (32) Middle (33) Right side (34) Other (specify): _____ Fourth Seat (41) Left side (42) Middle (43) Right side (44) Other (specify): _____ (97) In or on unenclosed area (98) Other seat (specify): _____ (99) Unknown</p>	<p>11. Occupant's Posture <u>0</u> (0) Normal posture (1) Abnormal posture (specify): _____ (9) Unknown</p> <p style="text-align: center;"><b>EJECTION/ENTRAPMENT</b></p> <p>12. Ejection <u>0</u> (0) No ejection (1) Complete ejection (2) Partial ejection (3) Ejection, unknown degree (9) Unknown</p> <p>13. Ejection Area <u>0</u> (0) No ejection (1) Windshield (2) Left front (3) Right front (4) Left rear (5) Right rear (6) Rear (7) Roof (8) Other area (e.g., back of pickup, etc.) (specify): _____ (9) Unknown</p> <p>14. Ejection Medium <u>0</u> (0) No ejection (1) Door/hatch/tailgate (2) Nonfixed roof structure (3) Fixed glazing (4) Nonfixed glazing (specify): _____ (5) Integral structure (8) Other medium (specify): _____ (9) Unknown</p> <p>15. Medium Status (Immediately Prior to Impact) <u>0</u> (0) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown</p> <p>16. Entrapment <u>0</u> (NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.) (0) Not entrapped (1) Entrapped (9) Unknown</p>
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**RESTRAINT SYSTEM AND SEAT EVALUATION****17. Manual (Active) Belt System Availability** 4

- (0) Not available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown
- (8) Other belt (specify): \_\_\_\_\_

(9) Unknown

**18. Manual (Active) Belt System Use** 04

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): \_\_\_\_\_

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify): \_\_\_\_\_

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify): \_\_\_\_\_

(99) Unknown if belt used

**19. Proper Use of Manual (Active) Belts** 1

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

**Belt Used Improperly**

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_

(8) Other improper use of manual belt system (specify): \_\_\_\_\_

(9) Unknown

**20. Manual (Active) Belt Failure Modes During Accident** 1

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Manual belt failure(s) (check all that apply)
  - ☐ Torn webbing (stretched webbing not included)
  - ☐ Broken buckle or latchplate
  - ☐ Upper anchorage separated
  - ☐ Other anchorage separated (specify): \_\_\_\_\_

☐ Broken retractor

☐ Other manual belt failure (specify): \_\_\_\_\_

(9) Unknown

**21. Automatic (Passive) Restraint System Availability** 1

- (0) Not equipped/not available
- (1) Airbag
- (2) Airbag disconnected (specify): \_\_\_\_\_

- (3) Airbag not reinstalled
- (4) 2 point automatic belts
- (5) 3 point automatic belts
- (6) Automatic belts destroyed or rendered inoperative
- (9) Unknown

**22. Automatic (Passive) Restraint Function** 4

- (0) Not equipped/not available

**Automatic Belt**

- (1) Automatic belt in use
- (2) Automatic belt not in use
- (3) Automatic belt use unknown

**Air Bag**

- (4) Airbag deployed during accident
- (5) Airbag deployed inadvertently just prior to accident
- (6) Deployed, accident sequence undetermined
- (7) Nondeployed
- (8) Unknown if deployed
- (9) Unknown

**23. Did Automatic (Passive) Restraint Fail** 1

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): \_\_\_\_\_

(9) Unknown

**24. Police Reported Restraint Use** 7

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): \_\_\_\_\_

3 - AIRBAG

- (8) Restrained, type unknown
- (9) Police indicated "unknown"

**25. Head Restraint Type/Damage by Occupant at This Occupant Position** 3

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): \_\_\_\_\_

(9) Unknown

**26. Seat Type (This Occupant Position)** 02

- (00) Occupant not seated or no seat  
 (01) Bucket  
 (02) Bucket with folding back  
 (03) Bench  
 (04) Bench with separate back cushions  
 (05) Bench with folding back(s)  
 (06) Split bench with separate back cushions  
 (07) Split bench with folding back(s)  
 (08) Pedestal (i.e., van type)  
 (09) Other seat type (specify):  
 \_\_\_\_\_

(99) Unknown

**27. Seat Performance (This Occupant Position)** 1

- (0) Occupant not seated or no seat  
 (1) No seat performance failure(s)  
 (2) Seat performance failure(s)  
     (check all that apply)  
☐ Seat adjusters failed  
☐ Seat back folding locks failed  
☐ Seat tracks failed  
☐ Seat anchors failed  
☐ Deformed by impact of passenger from rear  
☐ Deformed by impact of passenger from front  
☐ Deformed by own inertial forces  
☐ Deformed by passenger compartment intrusion (specify):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
☐ Other (specify):  
 \_\_\_\_\_

(9) Unknown

**CHILD SAFETY SEAT****28. Child Safety Seat Make/Model** 000

- (000) No child safety seat  
 Applicable codes are found in your NASS CDS  
 Data Collection, Coding, and Editing Manual  
 (997) Other make/model (specify):  
 \_\_\_\_\_

(998) Unknown make/model

(999) Unknown if child safety seat used

**29. Type of Child Safety Seat** 0

- (0) No child safety seat  
 (1) Infant seat  
 (2) Toddler seat  
 (3) Convertible seat  
 (4) Booster seat  
 (7) Other type child safety seat (specify):  
 \_\_\_\_\_

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

**30. Child Safety Seat Orientation** 00

- (00) No child safety seat

Designed for Rear Facing for This Age/Weight

- (01) Rear facing  
 (02) Forward facing  
 (08) Other orientation (specify):  
 \_\_\_\_\_

(09) Unknown orientation

Designed for Forward Facing for This Age/Weight

- (11) Rear facing  
 (12) Forward facing  
 (18) Other orientation (specify):  
 \_\_\_\_\_

(19) Unknown orientation

Unknown Design or Orientation for This Age/Weight, or Unknown Age/Weight

- (21) Rear facing  
 (22) Forward facing  
 (28) Other orientation (specify):  
 \_\_\_\_\_

(29) Unknown orientation

(99) Unknown if child safety seat used

**31. Child Safety Seat Harness Usage** 00**32. Child Safety Seat Shield Usage** 00**33. Child Safety Seat Tether Usage** 00

Note: Options below applicable to Variables OA31-OA33.

- (00) No child safety seat

Not Designed with  
Harness/Shield/Tether

- (01) After market harness/shield/tether added, not used  
 (02) After market harness/shield/tether used  
 (03) Child safety seat used, but no after market harness/shield/tether added  
 (09) Unknown if harness/shield/tether added or used

Designed with Harness/Shield/Tether

- (11) Harness/shield/tether not used  
 (12) Harness/shield/tether used  
 (19) Unknown if harness/shield/tether used

Unknown If Designed with Harness/Shield/Tether

- (21) Harness/shield/tether not used  
 (22) Harness/shield/tether used  
 (29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used



**INJURY CONSEQUENCES****34. Injury Severity (Police Rating)** 2

- (0) O – No injury
- (1) C – Possible injury
- (2) B – Nonincapacitating injury
- (3) A – Incapacitating injury
- (4) K – Killed
- (5) U – Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

**35. Treatment – Mortality** 4

- (0) No treatment
- (1) Fatal
- (2) Fatal – ruled disease

Nonfatal

- (3) Hospitalized
- (4) Transported and released
- (5) Treatment at scene – nontransported
- (6) Treatment later
- (8) Treatment – other (specify): \_\_\_\_\_

(9) Unknown

**36. Type of Medical Facility (for Initial Treatment)** 2

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify): \_\_\_\_\_

(9) Unknown

**37. Hospital stay** 00

- \_\_\_\_\_ Code number of days (up through 60) that the occupant stayed in the hospital
- (00) Not hospitalized
  - (61) 61 days or more
  - (99) Unknown

**38. Working Days Lost** 00

- \_\_\_\_\_ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
  - (61) 61 days or more
  - (62) Fatally injured
  - (97) Not working prior to accident
  - (99) Unknown

**39. Time to Death** 00

- \_\_\_\_\_ Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
  - (96) Fatal – ruled disease
  - (99) Unknown

**40. 1st Medically Reported Cause of Death** 00**41. 2nd Medically Reported Cause of Death** 00**42. 3rd Medically Reported Cause of Death** 00

- \_\_\_\_\_ Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
  - (97) Other result (specify): \_\_\_\_\_

(99) Unknown

**43. Number of Recorded Injuries for This Occupant** 02

- \_\_\_\_\_ Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
  - (97) Injured, details unknown
  - (99) Unknown if injured

UPDATE CANDIDATE

NO [☒]YES [☐]**\*\*\* STOP HERE \*\*\*****IF THERE ARE NO RECORDED INJURIES****(I.E., OA43=00, 97, 99)**



## OCCUPANT INJURY FORM

1. Primary Sampling Unit Number        3. Vehicle Number 01  
2. Case Number — ~~Stratum~~ 90-05 4. Occupant Number 01

### INJURY DATA

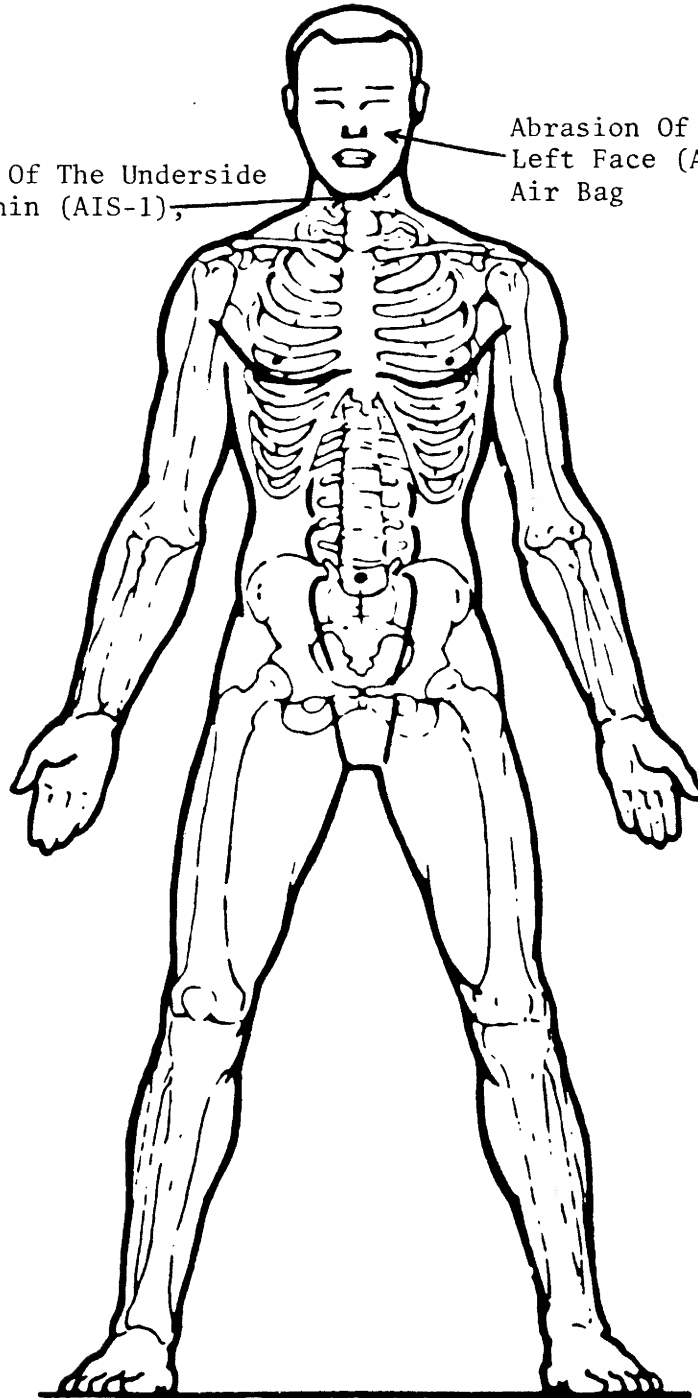
Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	Body Region	Aspect	Lesion	System Organ	A.I.S. Severity	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion No.
1st	5. <u>3</u>	6. <u>F</u>	7. <u>I</u>	8. <u>A</u>	9. <u>I</u>	10. <u>L</u>	11. <u>45</u>	12. <u>L</u>	13. <u>L</u>	14. <u>00</u>
2nd	15. <u>3</u>	16. <u>F</u>	17. <u>L</u>	18. <u>A</u>	19. <u>I</u>	20. <u>L</u>	21. <u>45</u>	22. <u>L</u>	23. <u>L</u>	24. <u>00</u>
3rd	25. <u>   </u>	26. <u>   </u>	27. <u>   </u>	28. <u>   </u>	29. <u>   </u>	30. <u>   </u>	31. <u>   </u>	32. <u>   </u>	33. <u>   </u>	34. <u>   </u>
4th	35. <u>   </u>	36. <u>   </u>	37. <u>   </u>	38. <u>   </u>	39. <u>   </u>	40. <u>   </u>	41. <u>   </u>	42. <u>   </u>	43. <u>   </u>	44. <u>   </u>
5th	45. <u>   </u>	46. <u>   </u>	47. <u>   </u>	48. <u>   </u>	49. <u>   </u>	50. <u>   </u>	51. <u>   </u>	52. <u>   </u>	53. <u>   </u>	54. <u>   </u>
6th	55. <u>   </u>	56. <u>   </u>	57. <u>   </u>	58. <u>   </u>	59. <u>   </u>	60. <u>   </u>	61. <u>   </u>	62. <u>   </u>	63. <u>   </u>	64. <u>   </u>
7th	65. <u>   </u>	66. <u>   </u>	67. <u>   </u>	68. <u>   </u>	69. <u>   </u>	70. <u>   </u>	71. <u>   </u>	72. <u>   </u>	73. <u>   </u>	74. <u>   </u>
8th	75. <u>   </u>	76. <u>   </u>	77. <u>   </u>	78. <u>   </u>	79. <u>   </u>	80. <u>   </u>	81. <u>   </u>	82. <u>   </u>	83. <u>   </u>	84. <u>   </u>
9th	85. <u>   </u>	86. <u>   </u>	87. <u>   </u>	88. <u>   </u>	89. <u>   </u>	90. <u>   </u>	91. <u>   </u>	92. <u>   </u>	93. <u>   </u>	94. <u>   </u>
10th	95. <u>   </u>	96. <u>   </u>	97. <u>   </u>	98. <u>   </u>	99. <u>   </u>	100. <u>   </u>	101. <u>   </u>	102. <u>   </u>	103. <u>   </u>	104. <u>   </u>

**AGE** 22  
**SEX** FEMALE  
**WT.** 122 lbs.  
**HT.** 59"

Abrasion Of The Underside  
Of The Chin (AIS-1),  
Air Bag

Abrasion Of The  
Left Face (AIS-1),  
Air Bag



## SOURCE OF INJURY DATA

### OFFICIAL

- (1) Autopsy records with or without hospital medical records
- (2) Hospital medical records other than emergency room (eg. discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

### UNOFFICIAL

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): \_\_\_\_\_
- (9) Police

## INJURY SOURCE

### FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add-on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A-pillar, instrument panel, or mirror (passenger side only)
- (16) Other front object (specify): \_\_\_\_\_

### LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A pillar
- (23) Left B pillar
- (24) Other left pillar (specify): \_\_\_\_\_
- (25) Left side window glass or frame

- (26) Left side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, or roof side rail
- (27) Other left side object (specify): \_\_\_\_\_

### RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A pillar
- (33) Right B pillar
- (34) Other right pillar (specify): \_\_\_\_\_
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, roof side rail
- (37) Other right side object (specify): \_\_\_\_\_

### INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify): \_\_\_\_\_
- (44) Head restraint system
- (45) Air bag
- (46) Other occupants (specify): \_\_\_\_\_
- (47) Interior loose objects
- (48) Child safety seat (specify): \_\_\_\_\_
- (49) Other interior object (specify): \_\_\_\_\_

### ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

### FLOOR

- (56) Floor including toe pan
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

### REAR

- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify): \_\_\_\_\_

### EXTERIOR OF OCCUPANT'S VEHICLE

- (65) Hood
- (66) Outside hardware (e.g., outside mirror, antenna)
- (67) Other exterior surface or tires (specify): \_\_\_\_\_
- (68) Unknown exterior objects

### EXTERIOR OF OTHER MOTOR VEHICLE

- (70) Front bumper
- (71) Hood edge
- (72) Other front of vehicle (specify): \_\_\_\_\_
- (73) Hood
- (74) Hood ornament
- (75) Windshield, roof rail, A-pillar
- (76) Side surface
- (77) Side mirrors
- (78) Other side protrusions (specify): \_\_\_\_\_

- (79) Rear surface
- (80) Undercarriage
- (81) Tires and wheels
- (82) Other exterior of other motor vehicle (specify): \_\_\_\_\_

- (83) Unknown exterior of other motor vehicle

### OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (84) Ground
- (85) Other vehicle or object (specify): \_\_\_\_\_

- (86) Unknown vehicle or object

### NONCONTACT INJURY

- (90) Fire in vehicle
- (91) Flying glass
- (92) Other noncontact injury source (specify): \_\_\_\_\_

- (97) Injured, unknown source

## INJURY SOURCE CONFIDENCE LEVEL

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

## DIRECT/INDIRECT INJURY

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

## OCCUPANT INJURY CLASSIFICATION

### O.I.C. Body Region

- (M) Abdomen
- (Q) Ankle-foot
- (A) Arm (upper)
- (B) Back-thoracolumbar spine
- (C) Chest
- (E) Elbow
- (F) Face
- (R) Forearm
- (H) Head-skull
- (U) Injured, unknown region
- (K) Knee
- (L) Leg (lower)
- (Y) Lower limb(s) (whole or unknown part)
- (N) Neck-cervical spine
- (P) Pelvic-hip
- (S) Shoulder
- (T) Thigh
- (X) Upper limb(s) (whole or unknown part)
- (O) Whole body

### (W) Wrist-hand

### Aspect of Injury

- (A) Anterior-front
- (B) Bilateral (rib fracture only)
- (C) Central
- (I) Inferior-lower
- (U) Injured, unknown aspect
- (L) Left
- (P) Posterior-back
- (R) Right
- (S) Superior-upper
- (W) Whole region

### Lesion

- (A) Abrasion
- (M) Amputation
- (V) Avulsion
- (B) Burn
- (K) Concussion
- (C) Contusion
- (N) Crush

### (G) Detachment, separation

- (D) Dislocation
- (F) Fracture
- (Z) Fracture and dislocation
- (U) Injured, unknown lesion
- (L) Laceration
- (O) Other
- (P) Perforation, puncture
- (R) Rupture
- (S) Sprain
- (T) Strain
- (E) Total severance, transection

### System/Organ

- (W) All systems in region
- (A) Arteries-veins
- (B) Brain
- (D) Digestive
- (E) Ears
- (O) Eye
- (H) Heart
- (U) Injured, unknown system

### (I) Integumentary

- (J) Joints
- (K) Kidneys
- (L) Liver
- (M) Muscles
- (N) Nervous system
- (P) Pulmonary-lungs
- (R) Respiratory
- (S) Skeletal
- (C) Spinal cord
- (Q) Spleen
- (T) Thyroid, other endocrine gland
- (G) Urogenital
- (V) Vertebrae

### Abbreviated Injury Scale

- (1) Minor injury
- (2) Moderate injury
- (3) Serious injury
- (4) Severe injury
- (5) Critical injury
- (6) Maximum (untreatable)
- (7) Injured, unknown severity

# AIRBAG ACCIDENT LEVEL FORM

(Leave Unknowns Blank)

Log Number CA 90-05

Accident State NJ NEW JERSEY

Accident Date

Month            (January = 01, February = 02, etc.)

Day of Month           

Year 90

Investigating Team 05 CALSPAN

Fleet Vehicle 6 1 - 73' Chev, Volvo, or 72' Merc,             
 2 - No., 3 - Insurance Fleet,  
 4 - GSA Fleet, 5 - Police Fleet,  
 6 - Other Corporate private fleet)

Did Airbag car require towing 1 (1 = yes; 2 = no)

Did airbag deploy? 1 (1 = yes; 2 = no; 3 = inadvertent)

Model Year-Vehicle Make 89 02015 (NASS Make/Model Code)  
89 DODGE DAYTONA

		EVENT #	DEPLOY Y/N
CDC (rank by severity)	1 <u>1 2 F L E S 9</u>	<u>1</u>	<u>Y</u>
	2 <u>                                </u>	<u>          </u>	<u>          </u>
	3 <u>                                </u>	<u>          </u>	<u>          </u>

Highest AIS in Airbag car 1

Delta-V of principal damage to Airbag car UNKNOWN SIDESWIRE (Deployment Event)

Object struck by Airbag car 1983 TOYOTA COROLLA 01

Driver age in Airbag car 022

Number of front seat occupants in Airbag car 1

Number of belted front seat occupants in Airbag car 1

Type of Investigation S (R=Remote; S= On-Site)

# AIRBAG PERSON LEVEL FORM

(Complete one form for each person in Airbag car)

Log Number CA 90-05

Occupant Number 01

(Assigned by coder for each Airbag car; 01, 02, ...based on seat position)

Occupant's age in years 022

Seating position 1

1 left

2 center 1 First person in center is 2

3 center 2

4 right

In which seat was the occupant? 1 (1 = front, 2 = back)

Was the occupant wearing a belt restraint? 1 (1 = yes, 2 = no)

Was the occupant killed? 1 (1 = Not killed, 2 = killed)

S.S. Region		OIC	INJURY SOURCE	DIRECT/ INDIRECT	SOURCE OF DATA
<u>6</u>	1	<u>F I A I 1</u>	<u>45</u>	<u>1</u>	<u>07</u>
<u>6</u>	2	<u>F L A I 1</u>	<u>45</u>	<u>1</u>	<u>07</u>
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				

(Use NASS '88 Coding)

(if no injuries, enter 0 for first AIS and leave the rest of the OIC's blank)